

FIG. 1A

1				50	
CTAG_HUMAN	NY-ESO	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
AAD05202	- CAG-3	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
CAA11044	- LAGE-1a	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
CAA10194	- LAGE-1s	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
CAA11043	- LAGE-1b	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
CAA10196	- LAGE-1L	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
AAH02883	CT-2	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA		
	Consensus	(1)	MOAEGRCGTGGSTGDADEGCGGCGTIPDCPGCGNACGPGCEAGATCGRGPRGAGA	51	100
CTAG_HUMAN	NY-ESO	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
AAD05202	- CAG-3	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
CAA11044	- LAGE-1a	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
CAA10194	- LAGE-1s	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
CAA11043	- LAGE-1b	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
CAA10196	- LAGE-1L	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
AAH02833	CT-2	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		
	Consensus	(51)	ARASGPRGGAPRGPHGGGAASLNCCPRCGARPPSSRLLEFFNAMPENPPM		

FIG. 1B

		101	150
CTAG_HUMAN NY-ESO	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
AAD05202 - CAG-3	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
CAA11044 - LAGE-1a	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
CAA10194 - LAGE-1s	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
CAA11043 - LAGE-1b	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
CAA10196 - LAGE-1L	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
AAH02833 CT-2	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
Consensus	(101)	EAEIARSRSEINQDAIPLEPVPGVNIKKNFTVSGNNLTNNNTAADRRQQLQIS	
		151	200
CTAG_HUMAN NY-ESO	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
AAD05202 - CAG-3	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
CAA11044 - LAGE-1a	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
CAA10194 - LAGE-1s	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
CAA11043 - LAGE-1b	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
CAA10196 - LAGE-1L	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
AAH02833 CT-2	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	
Consensus	(151)	SCLOQLSLMWITQCFLPVFLAQ PSGQR	

FIG. 1C

CTAG_HUMAN	NY-ESO	(181)	201	-----
AAD05202	- CAG-3	(181)		-----
CAA11044	-LAGE-1a	(181)		-----
CAA10194	- LAGE-1s	(181)		-----
CAA11043	- LAGE-1b	(201)		ENVMFESAPHI
CAA10196	- LAGE-1L	(201)		ENVMFESAPHI
AAH02833	CT-2	(201)		ENVMFESAPHI
	Consensus	(201)		

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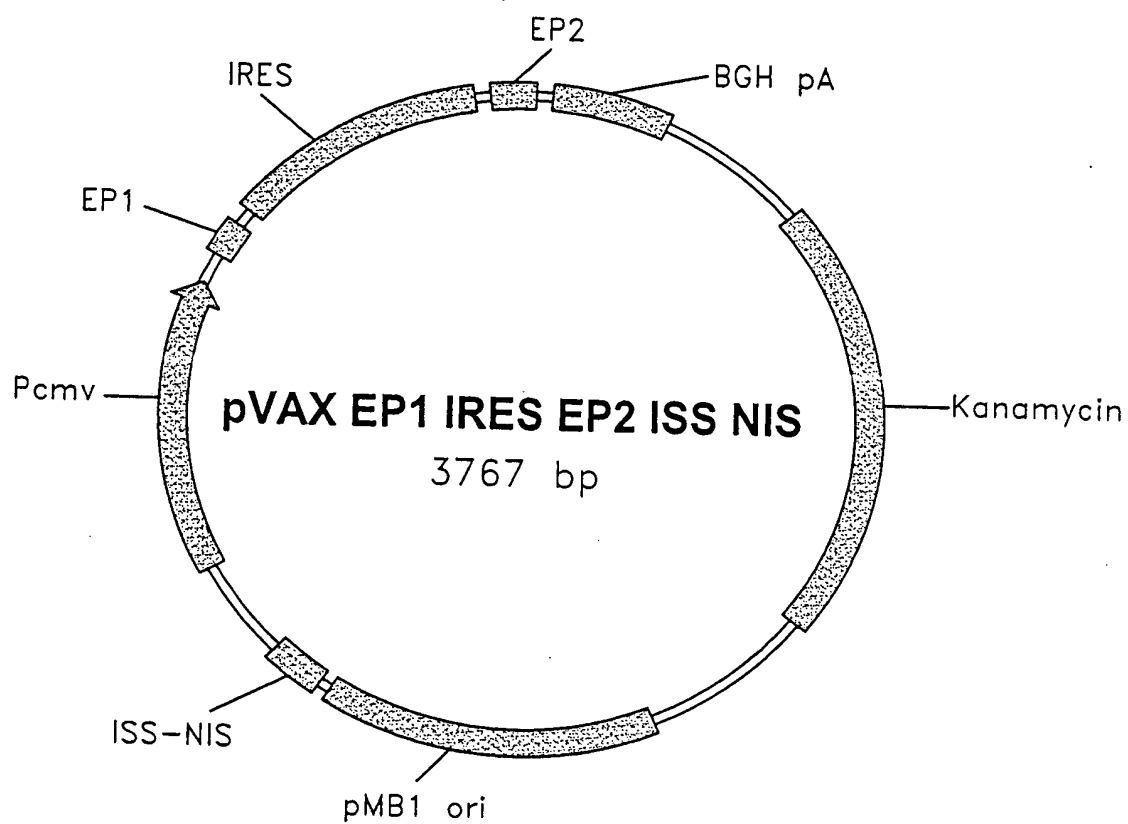
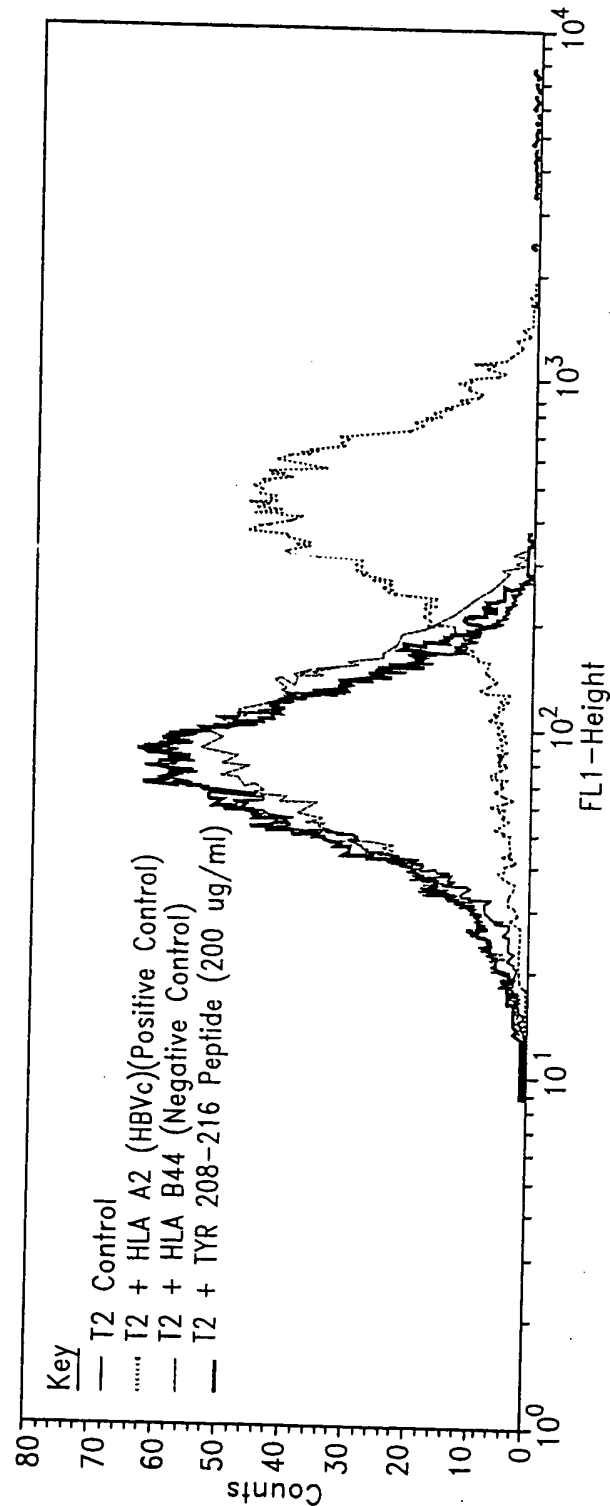


FIG. 2

FIG. 3A

FACscan Analysis of Binding Assay to Determine the Binding Ability of Tyrosinase 208-216 Peptide to MHC Class 1

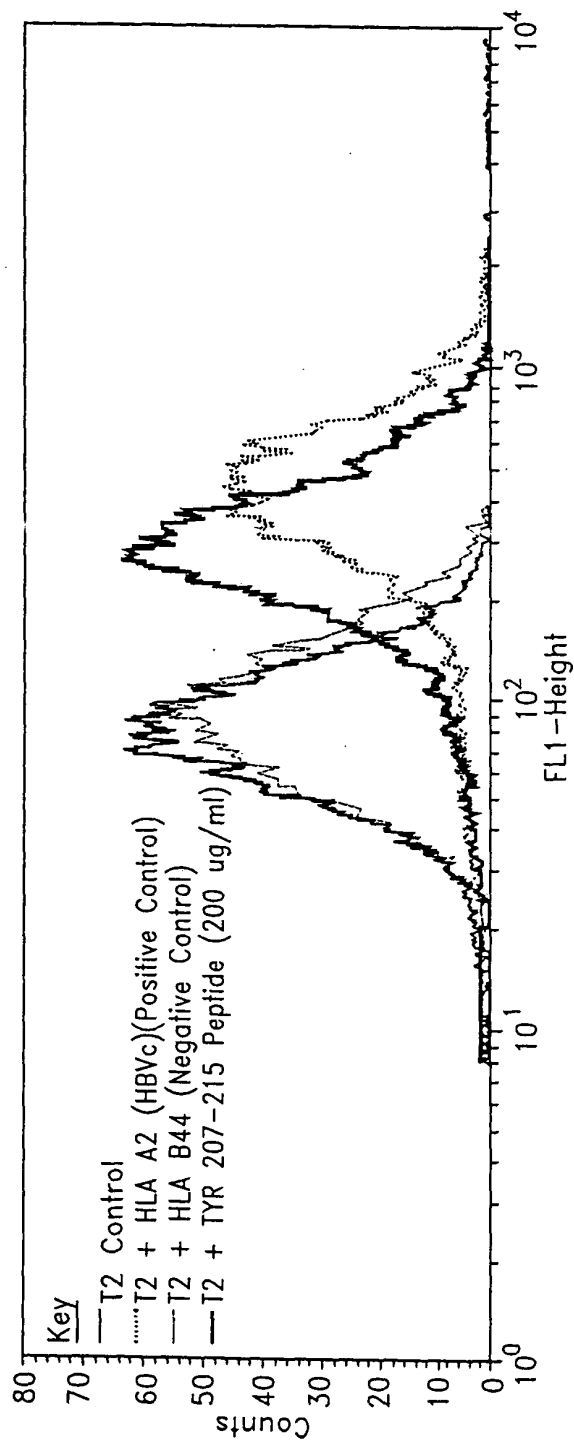


F1 (HLA A2 Peptide) = 3.13

F1 (TYR 208-216 Peptide) = 0.01

FIG. 3B

FACscan Analysis of Binding Assay to Determine the Binding Ability of Tyrosinase 207-215 Peptide to MHC Class 1

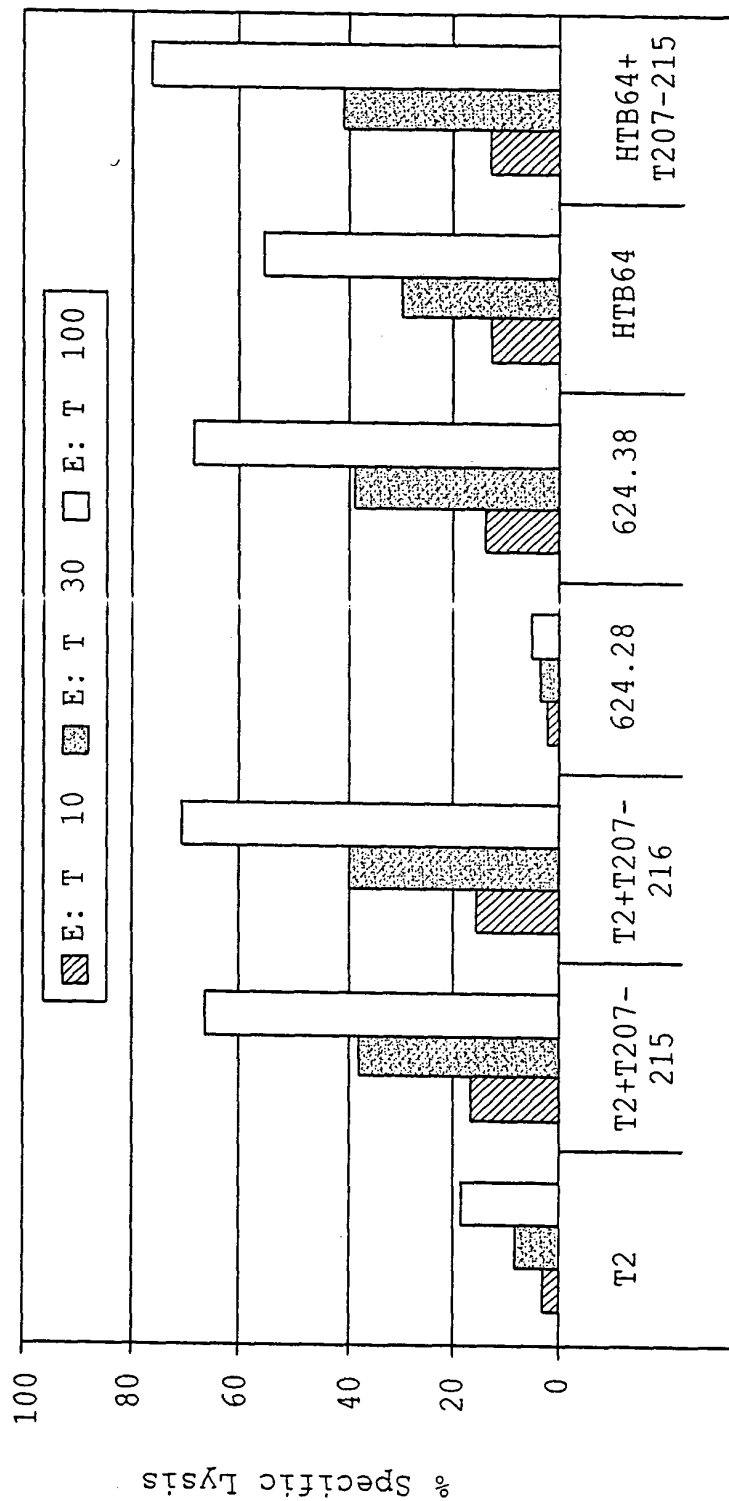


F1 (HLA A2 Peptide) = 3.13

F1 (TYR 207-215 Peptide) = 2.00

FIG. 3C

HLA A2 restricted and tyrosinase specific lysis by CTL from Tyr207-215 IVS blood



CTL from Tyr 207-215 IVS blood

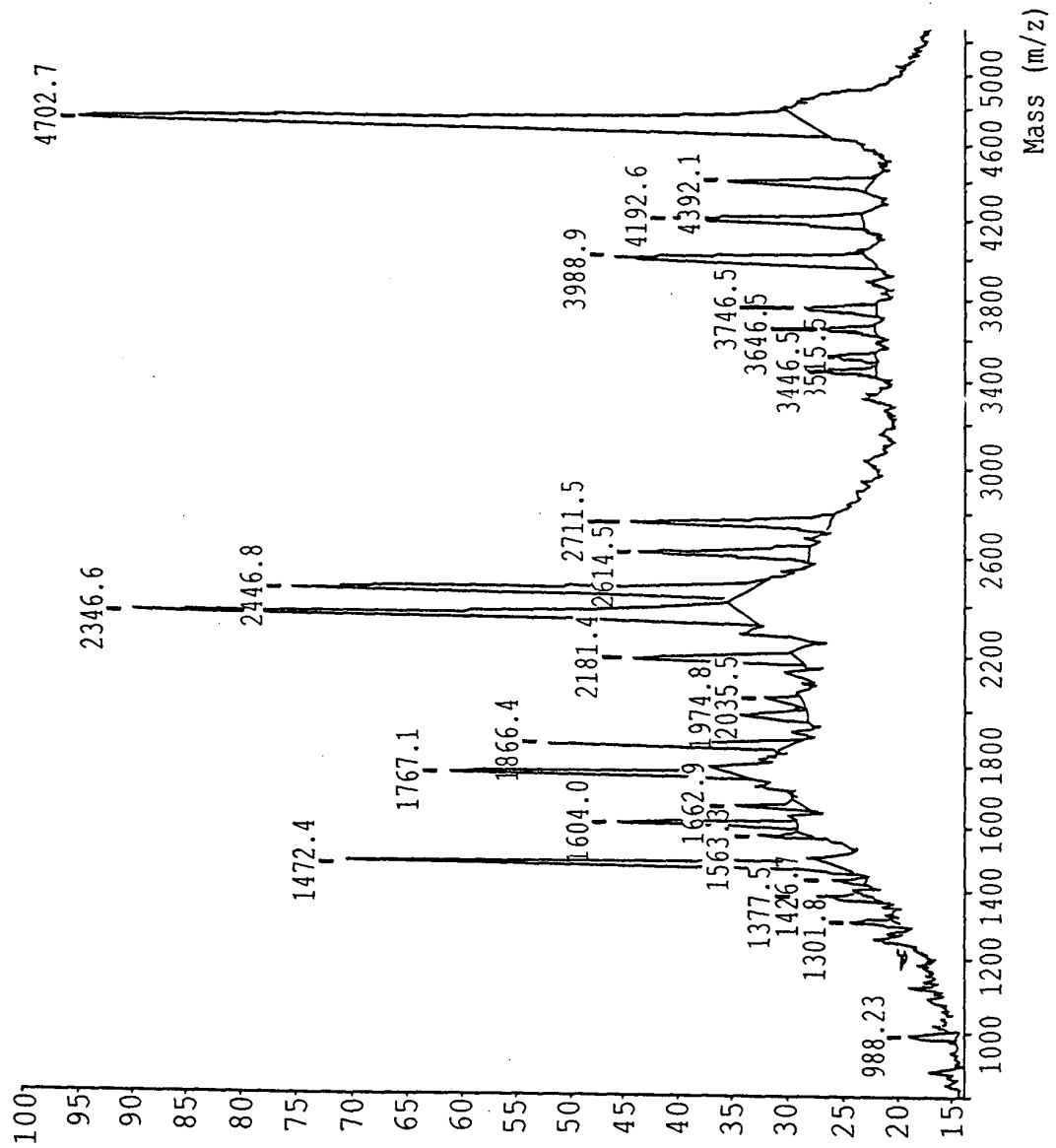
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FIG. 4



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FIG. 5
Comparison of Peptides Binding Affinity to HLA A2

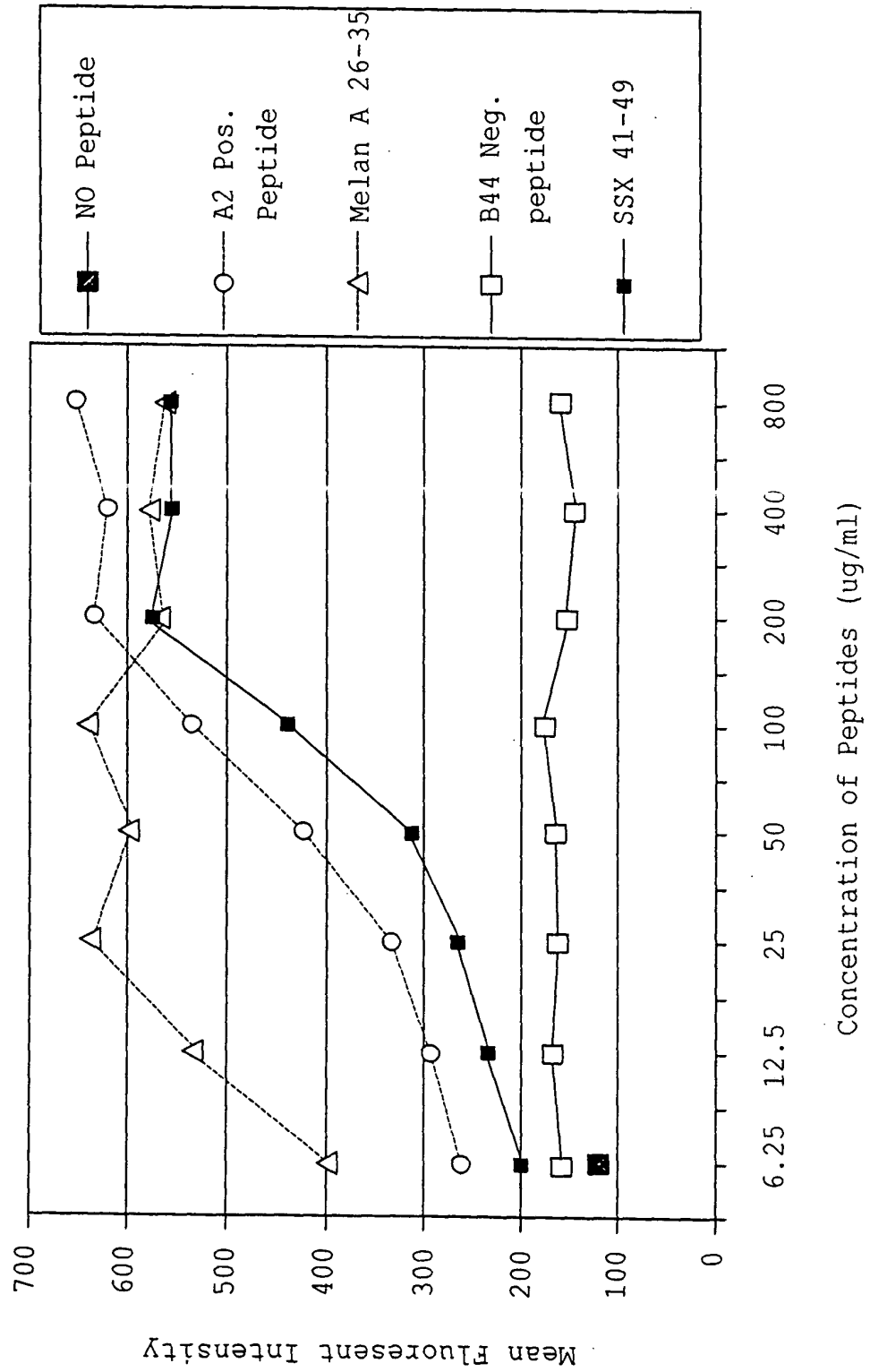


FIG. 6

SSX2₄₁₋₄₉ specific lysis by CTL from peptide
injected HHD1 mice

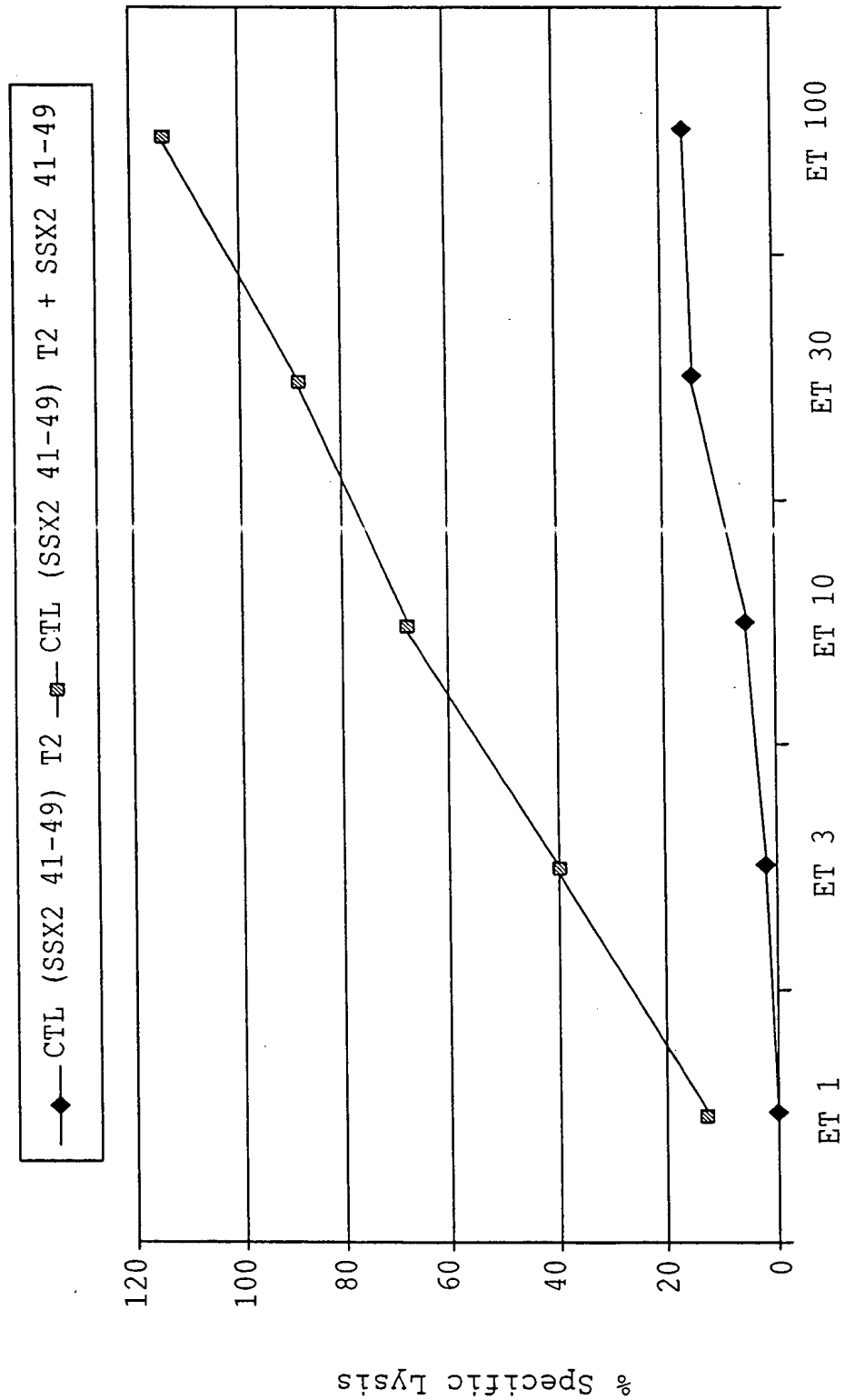
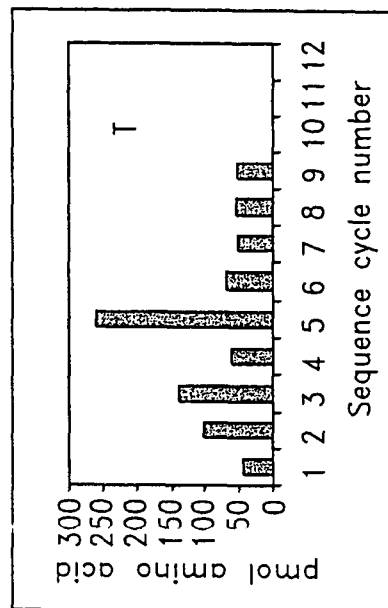
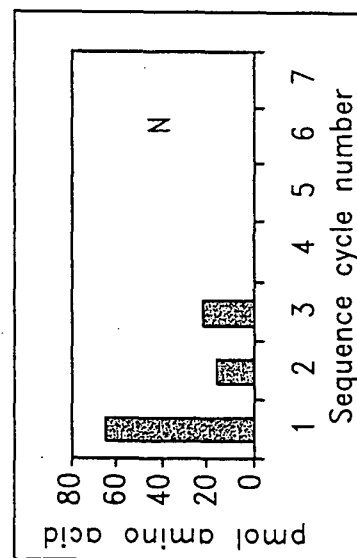
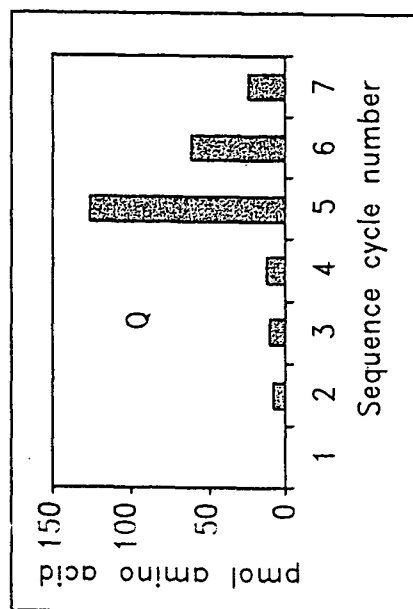
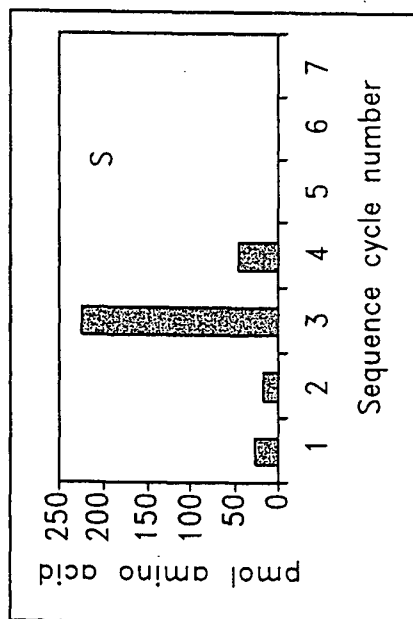


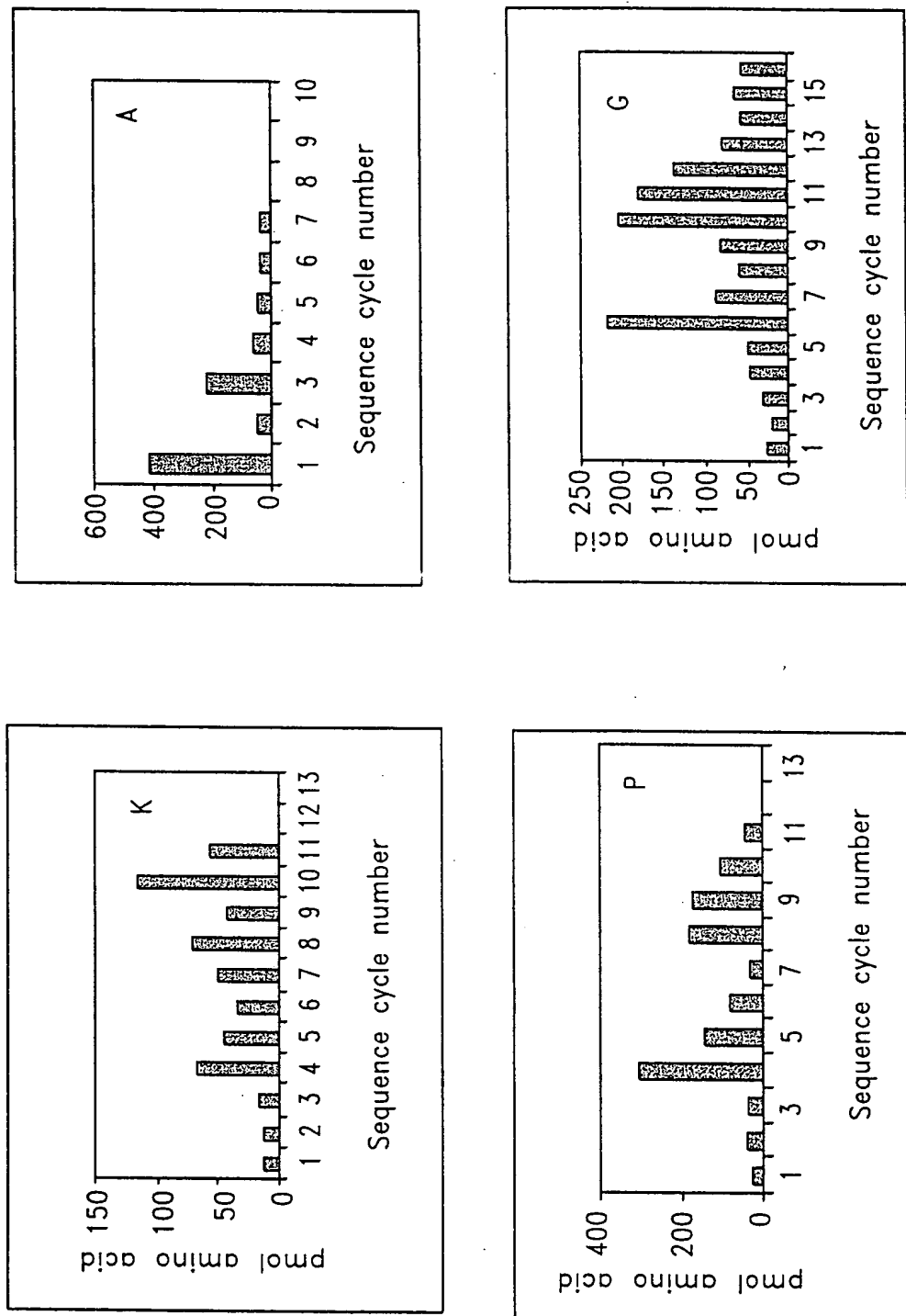
FIG. 7A

163-AF**S**P**Q**GMPEGLVYV**N**YAR**T**EDFEFKLERDM-192



Pool sequencing of PSMA_163-192 Digested for 60 min by proteasome

FIG. 7B



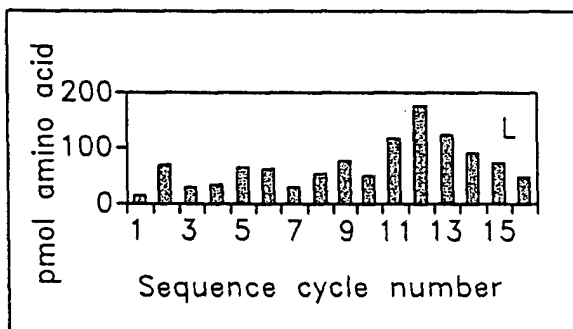
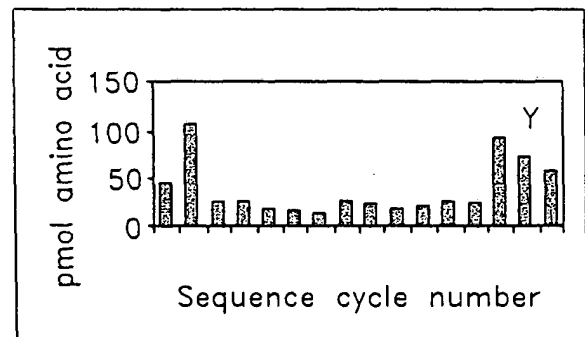
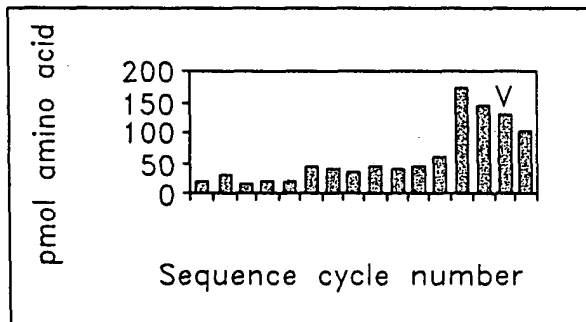
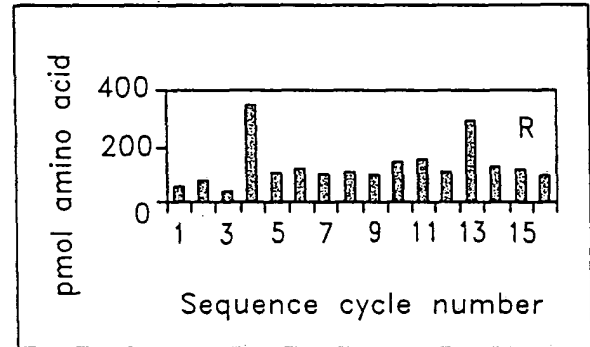
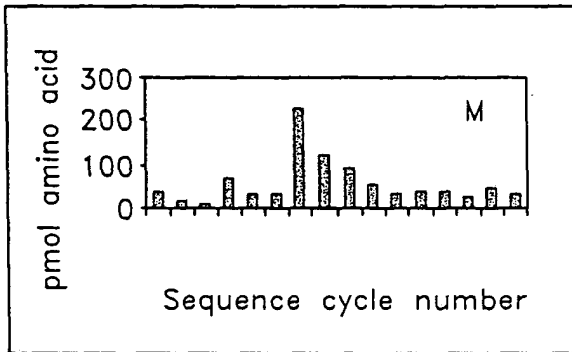
Pool sequencing of PSMA_163-192 Digested for 60 min by proteasome

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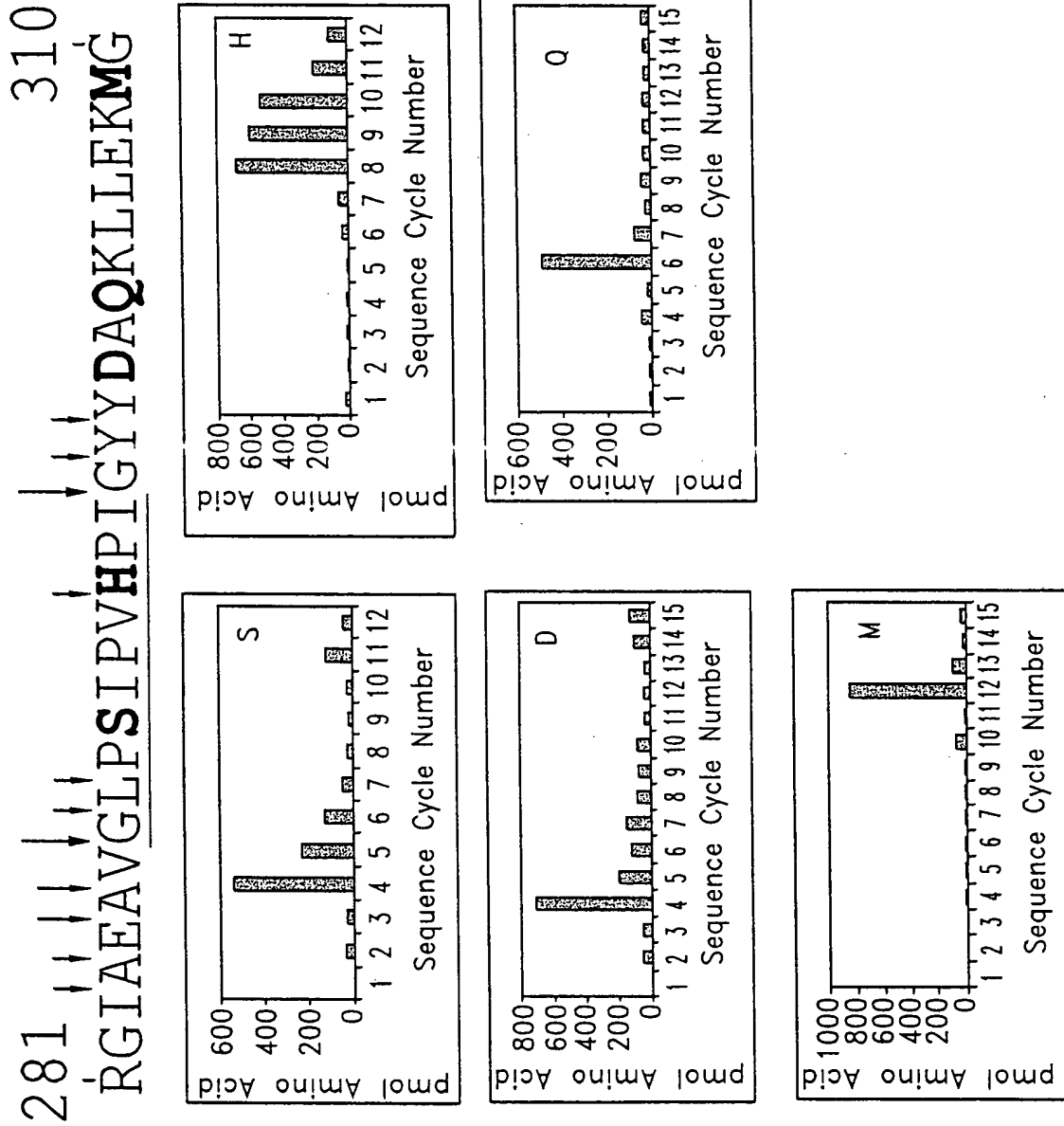
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Pool sequencing of PSMA_163-192 Digested for 60 min by proteasome

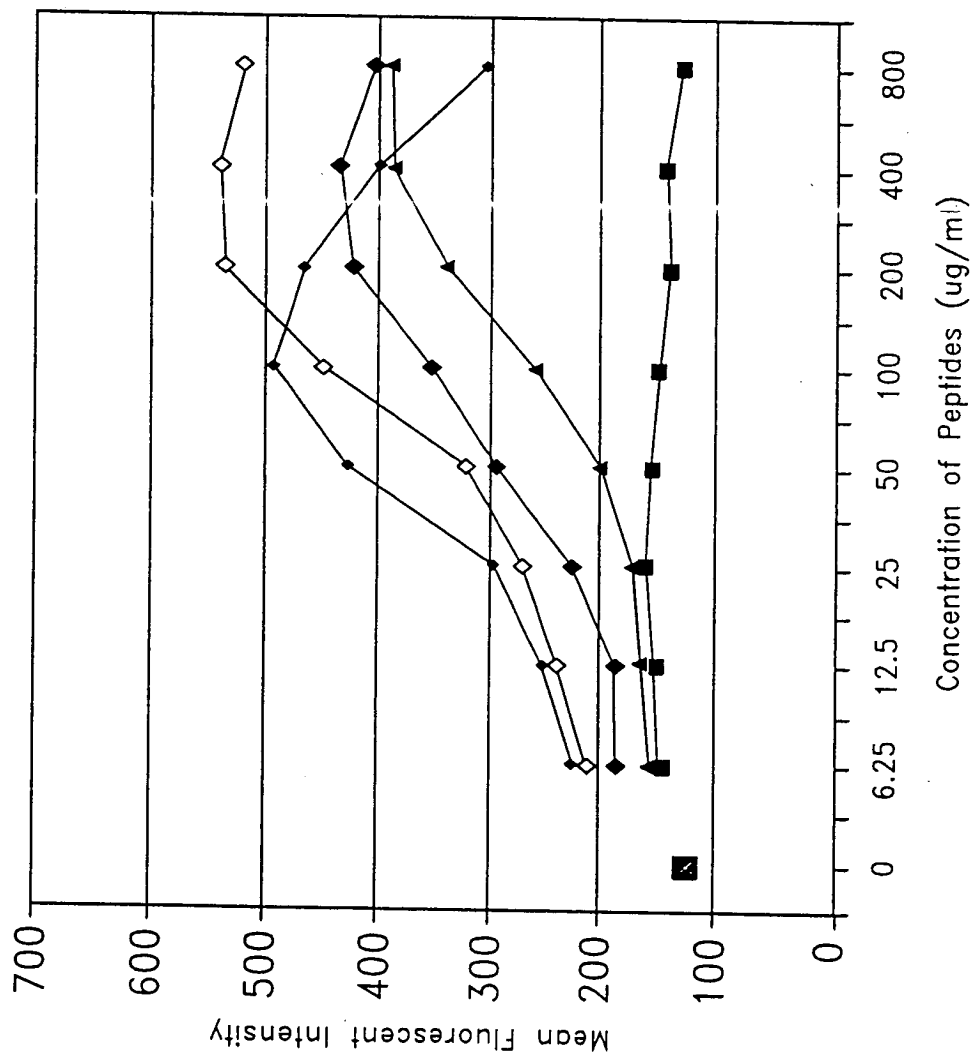
FIG. 7C

FIG. 9



Pool sequencing of PSMA_281_310 Digested for 60 min by Proteasome

FIG. 10
Comparison of Peptides Binding
Affinity to HLA A2
by Binding Assay



Autologous DC Present A1 Peptide to CD8 T cell

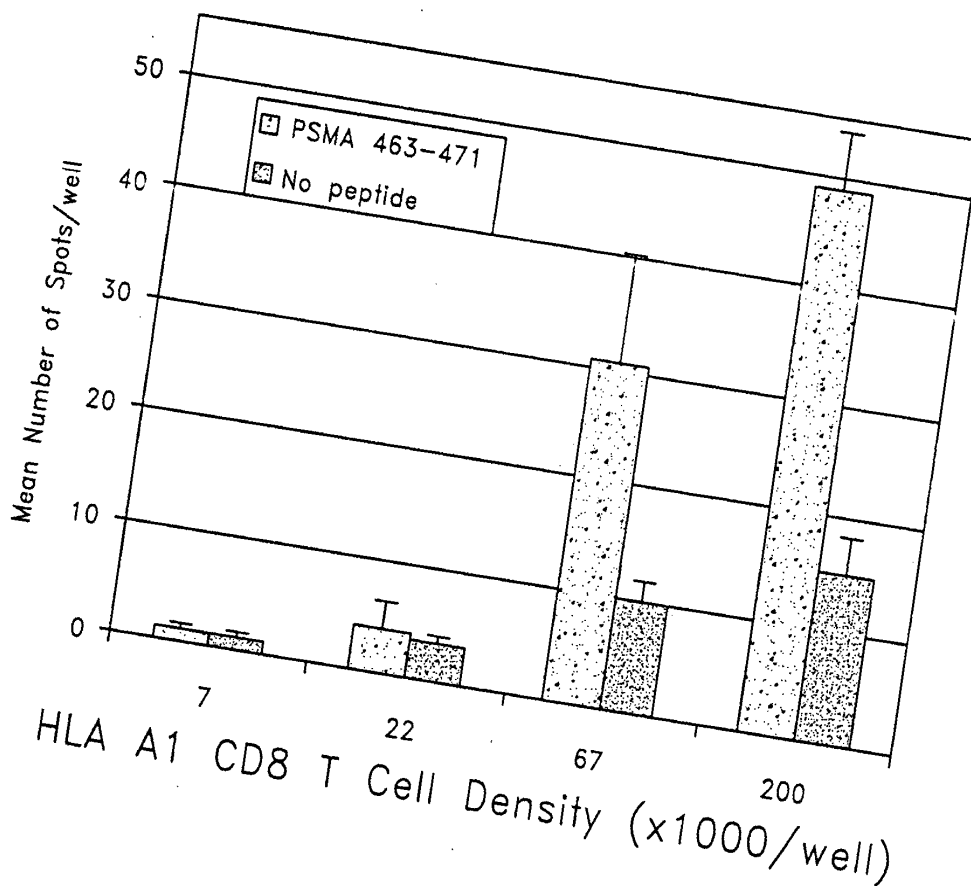


FIG. 11

Secretion of IFN γ Was Blocked by Anti-A1 Antibody

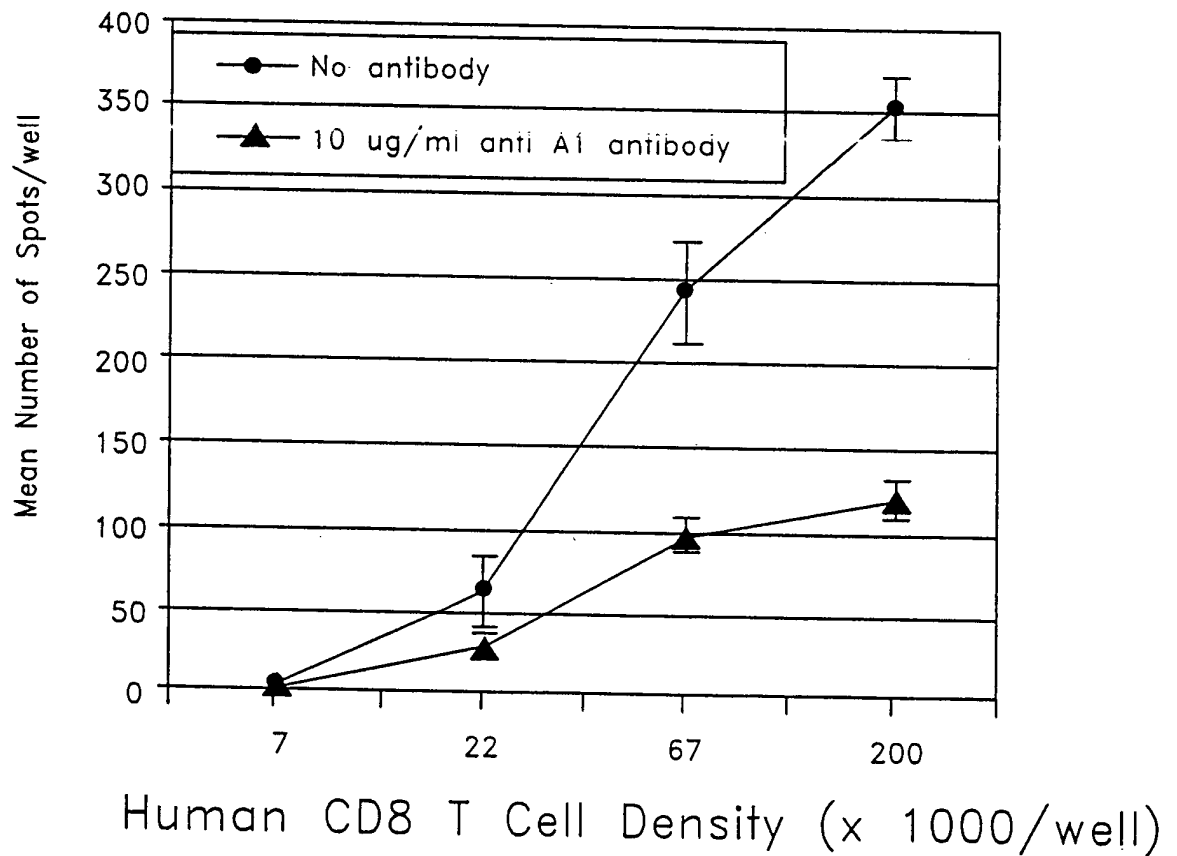


FIG. 12

FIG. 13

Comparison of Peptides Binding Affinity to HLA A2 by Binding Assay

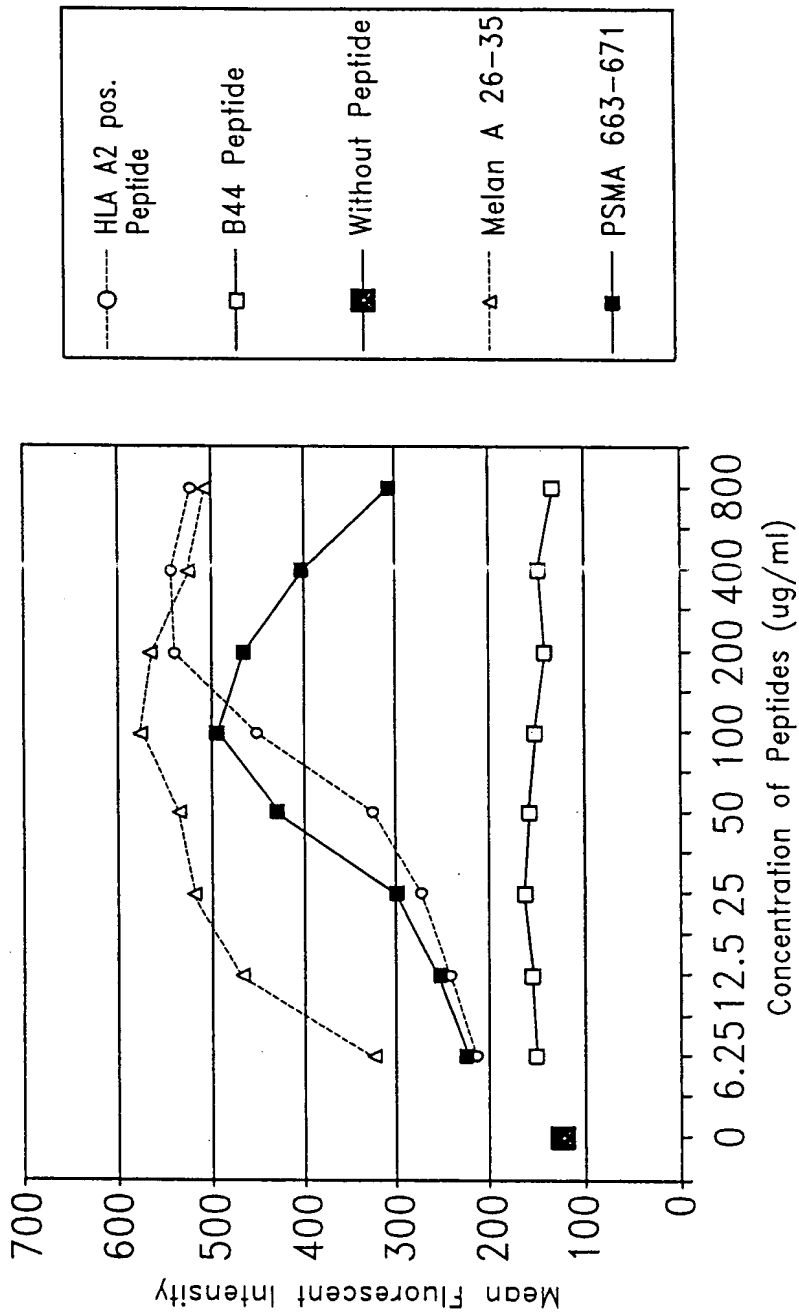
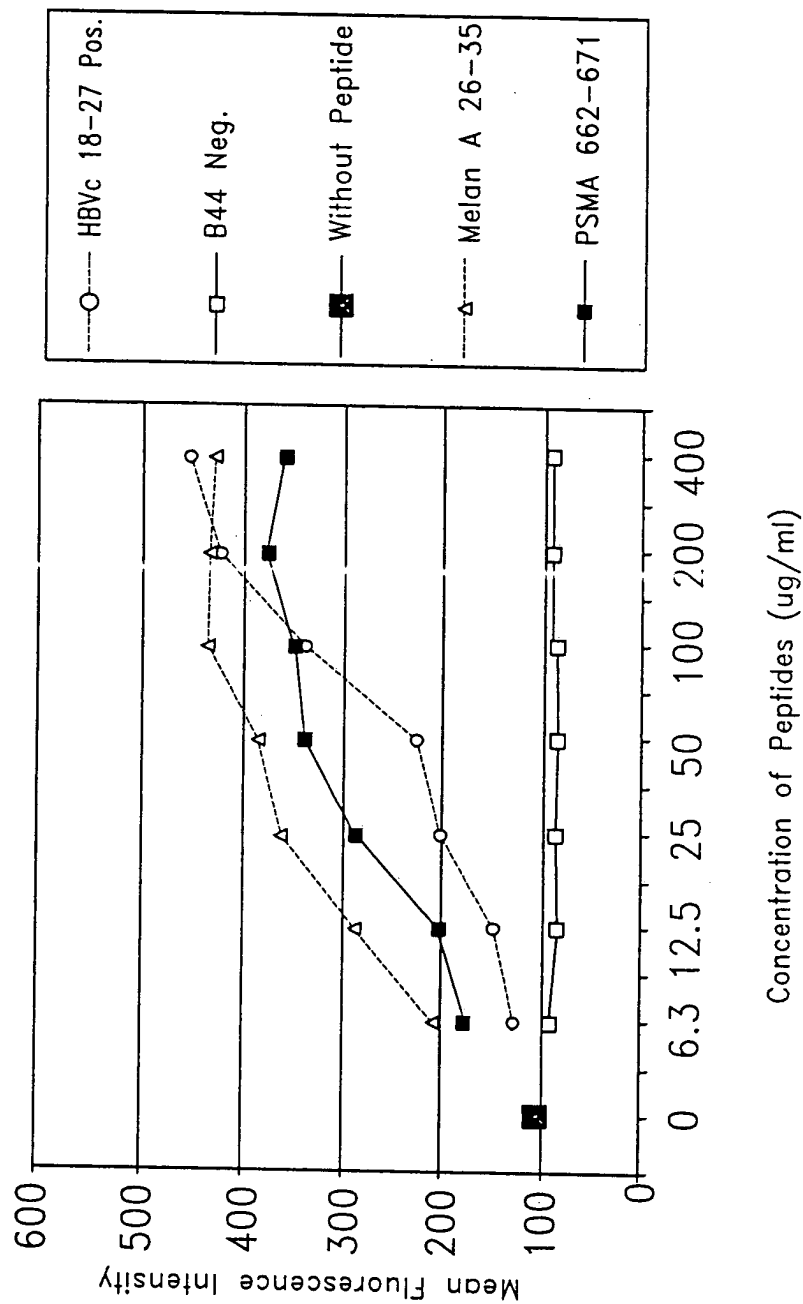
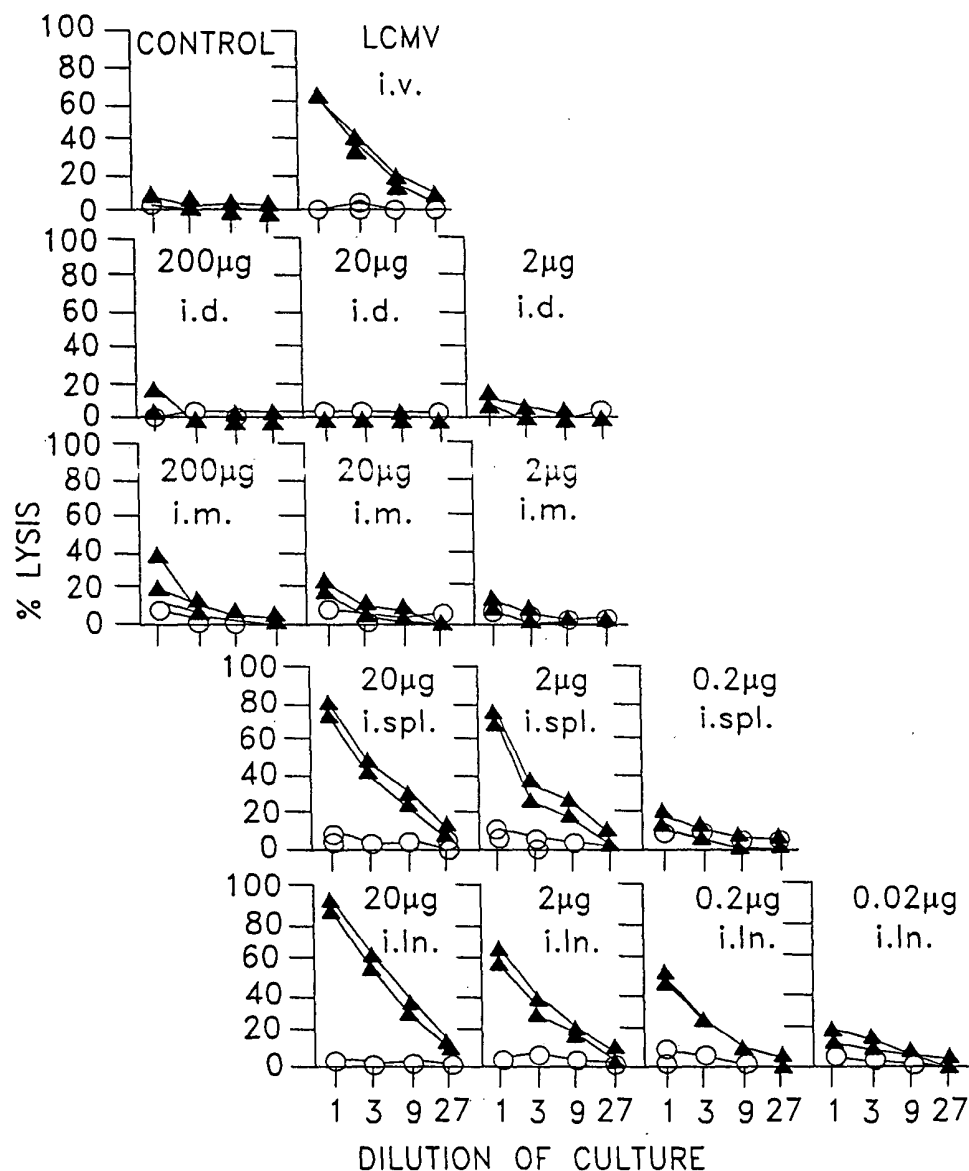


FIG. 14

Comparison of Peptides Binding Affinity to HLA A2 by Binding Assay

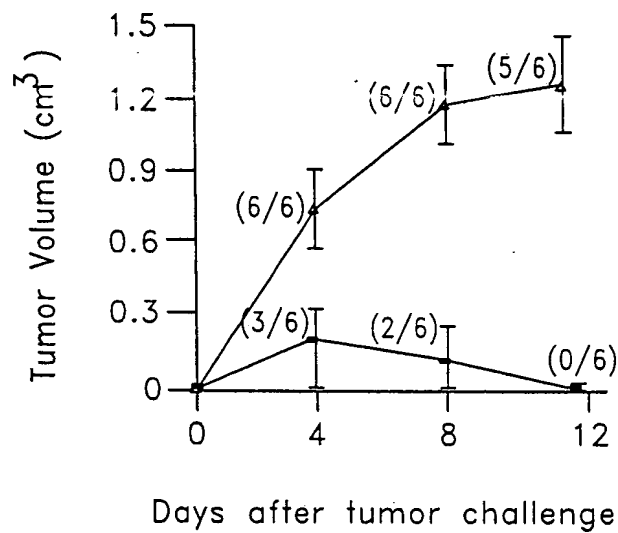
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Graphs show lysis of unpulsed EL4 cells (open circles) and EL4 cells pulsed with gp33 peptide (solid triangles). Symbols represent individual mice and one of three similar experiments is shown.

FIG. 15



Mean tumor volumes \pm 1SD are shown for mice immunized with pEFGPL33A DNA (solid circles) or control pEGFP-N3 DNA (open triangles). Numbers in brackets indicate number of mice with tumors/total number of mice in group. One of two similar experiments is shown.

FIG. 16

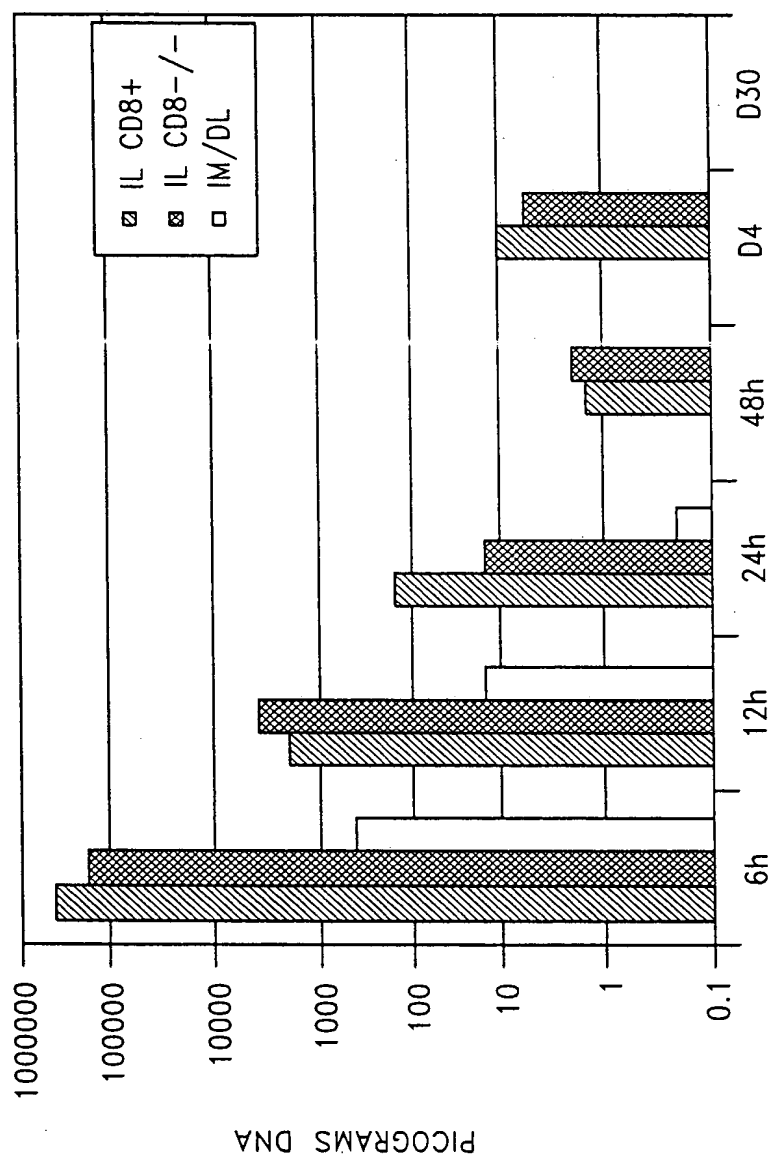


FIG. 17

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Tyrosinase (171-203)

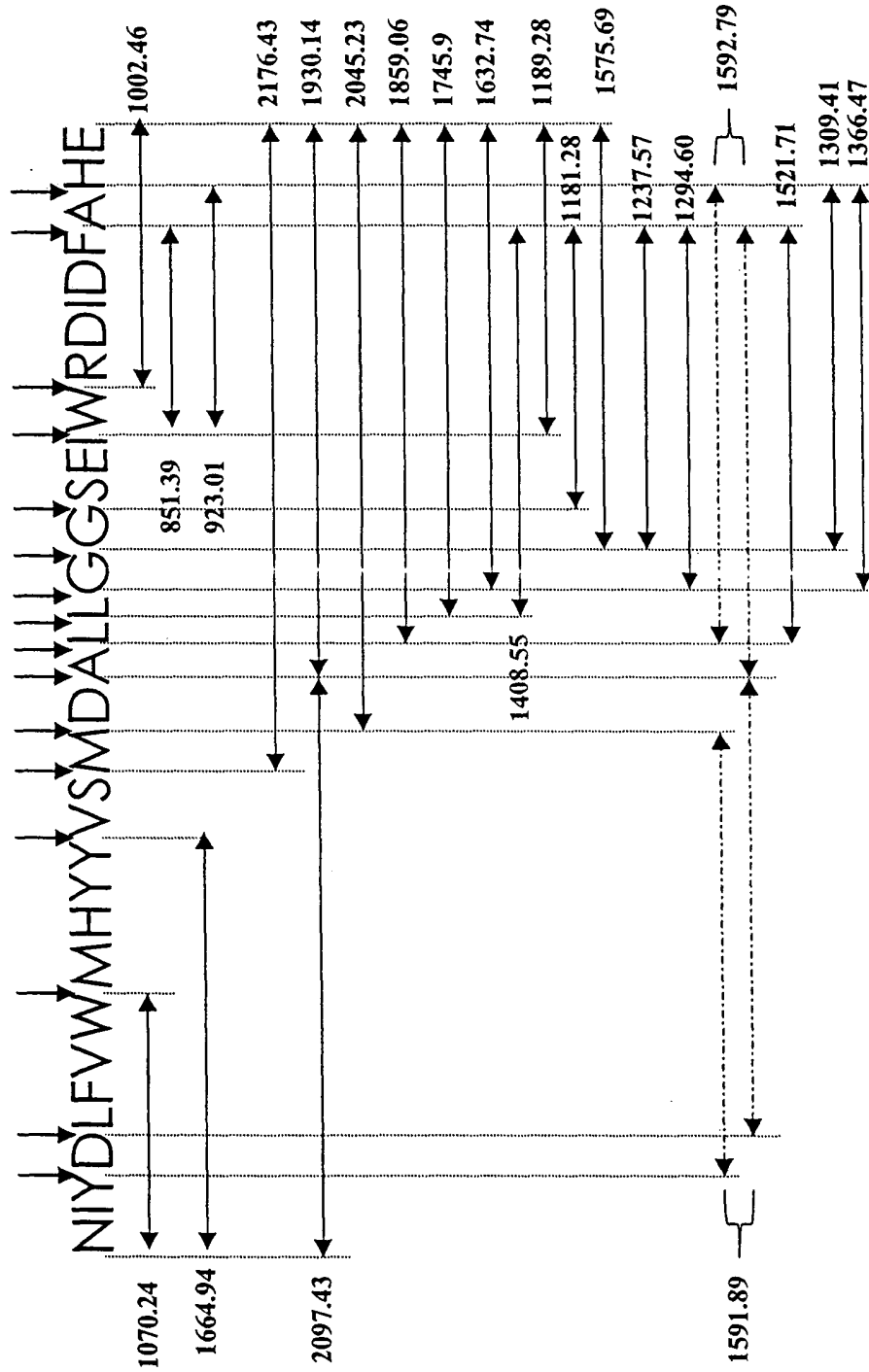


Figure 18

Tyr (401-427)

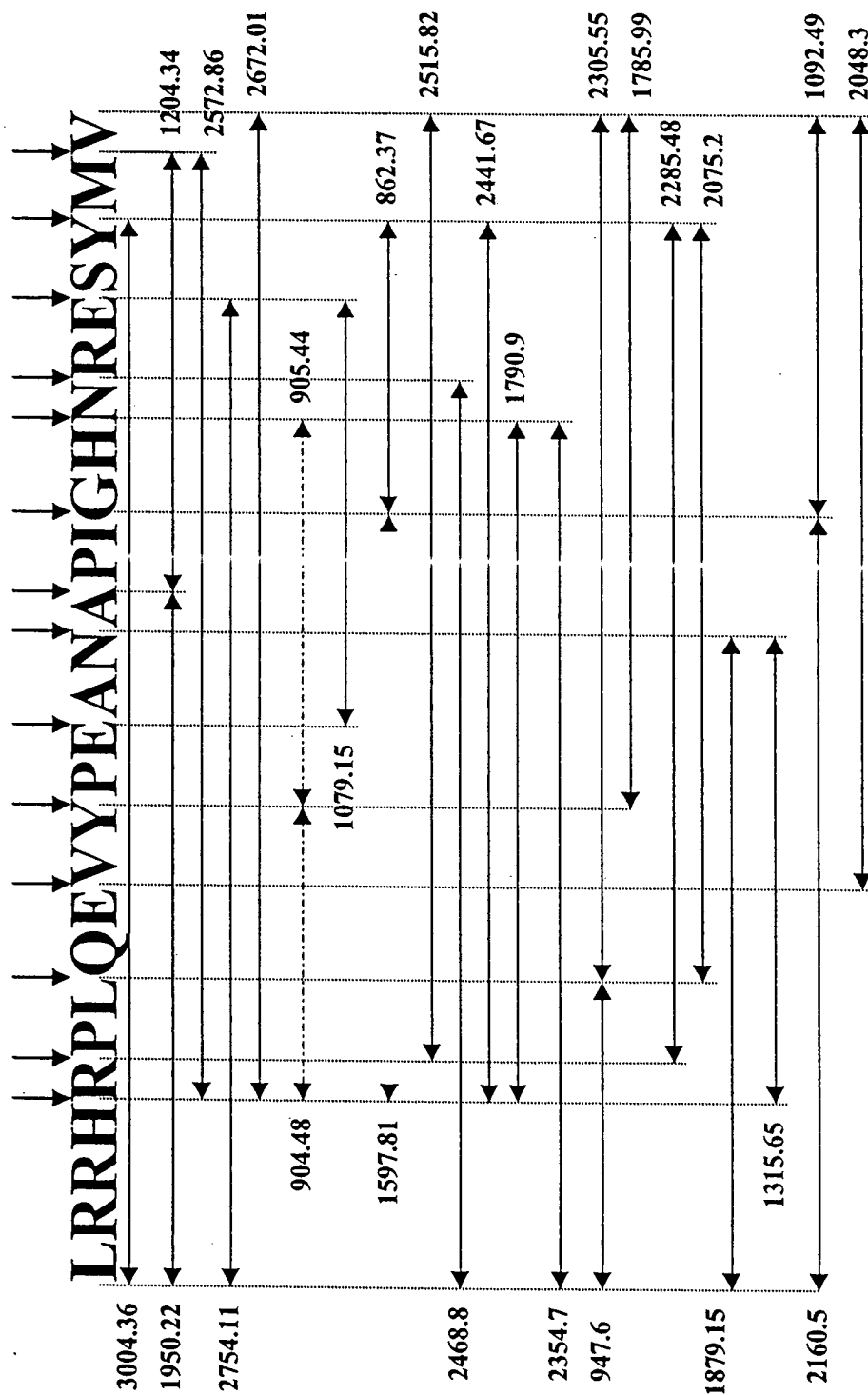


Figure 19

Tyrosinase (415-449)

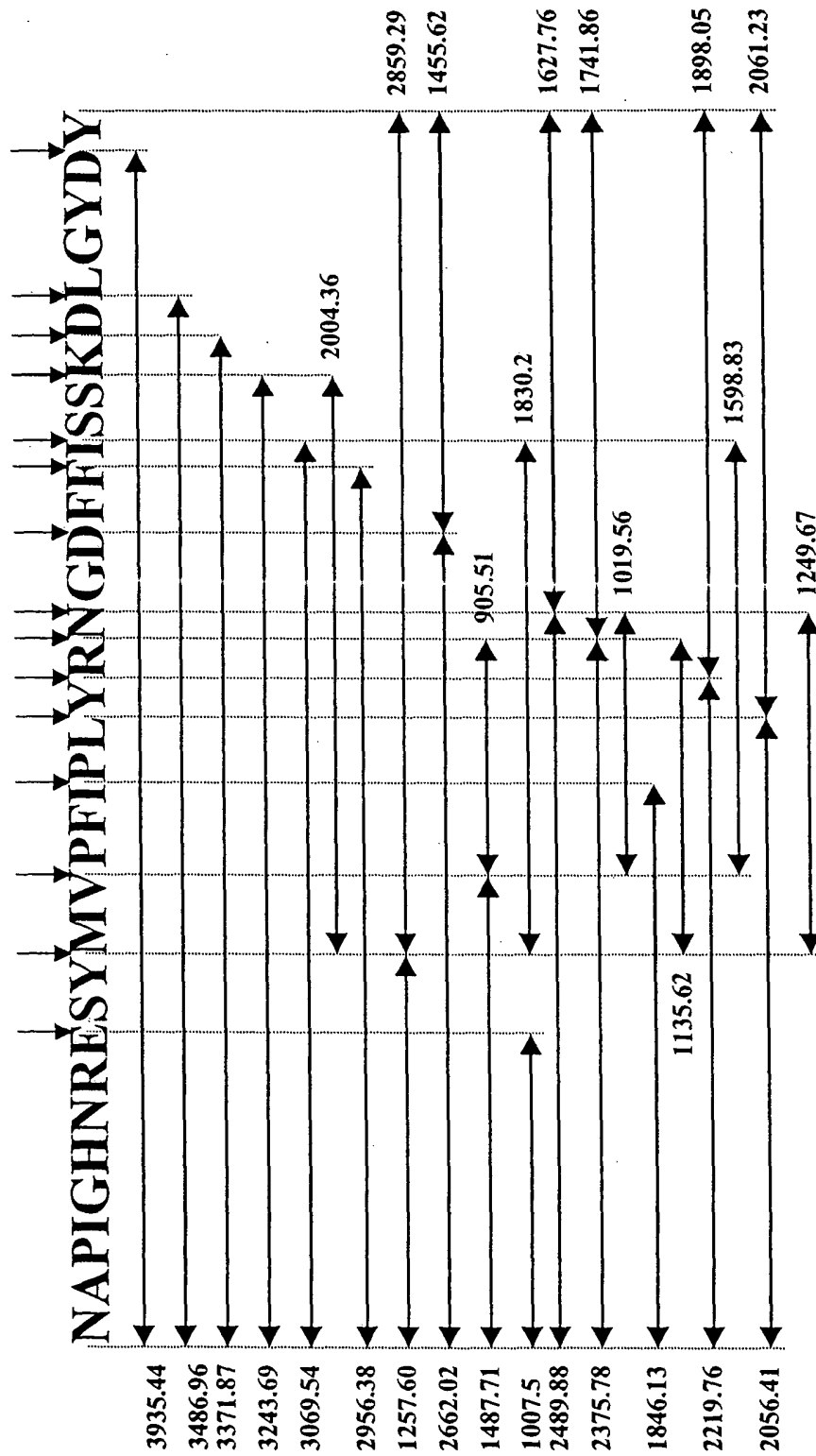


Figure 20

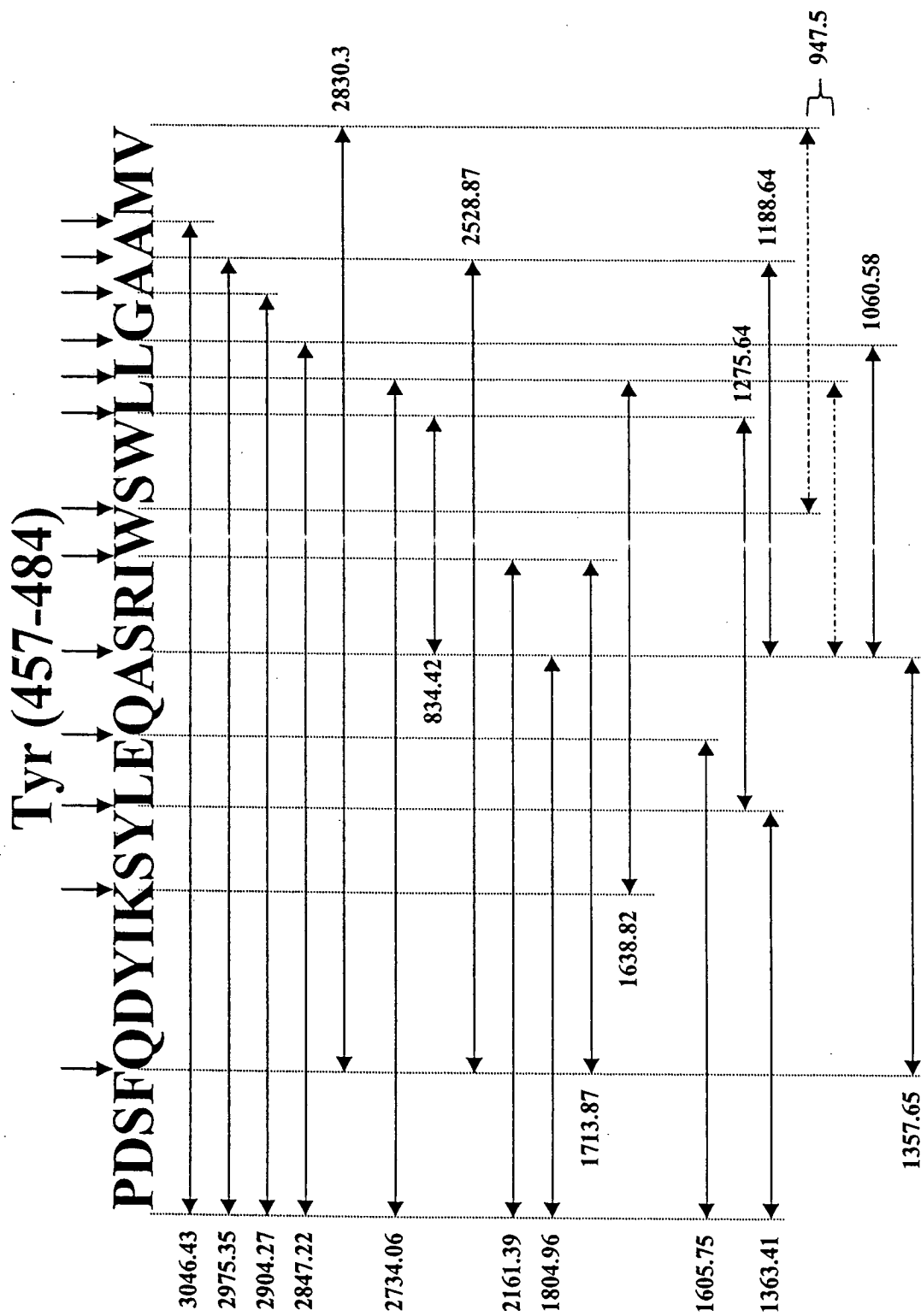


Figure 21

CEA 92-118

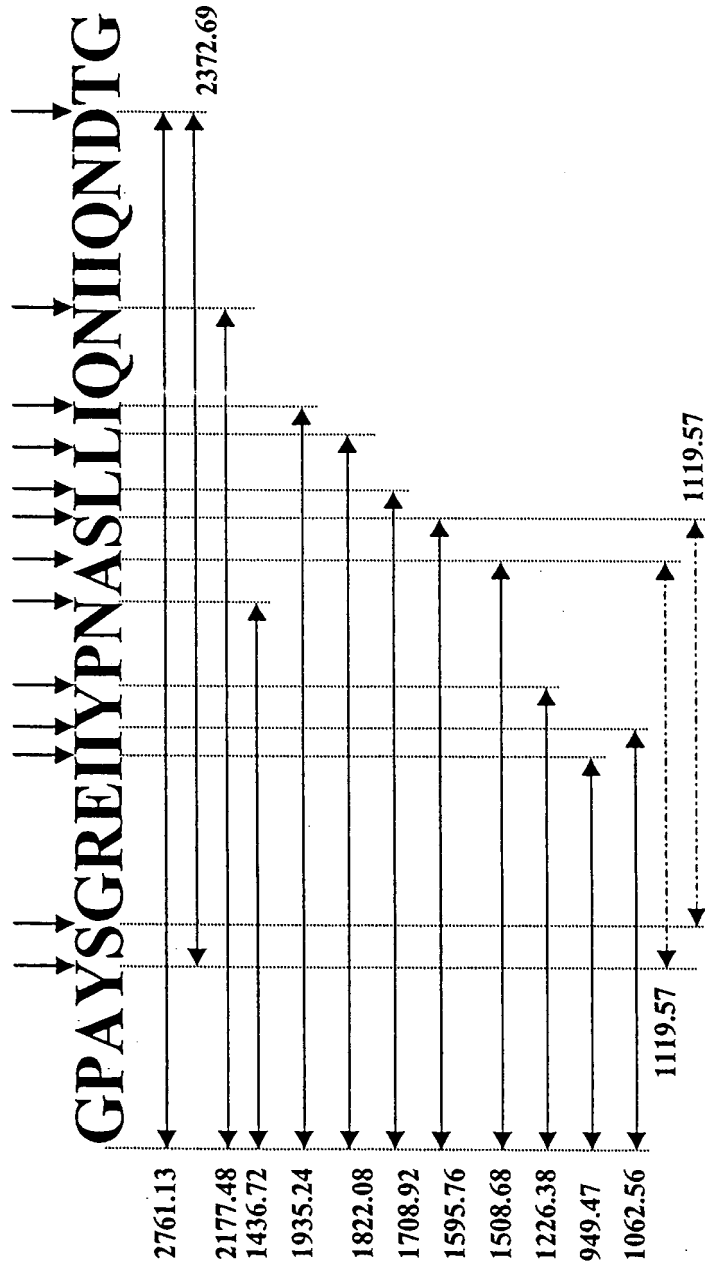


Figure 22

CEA 131-159

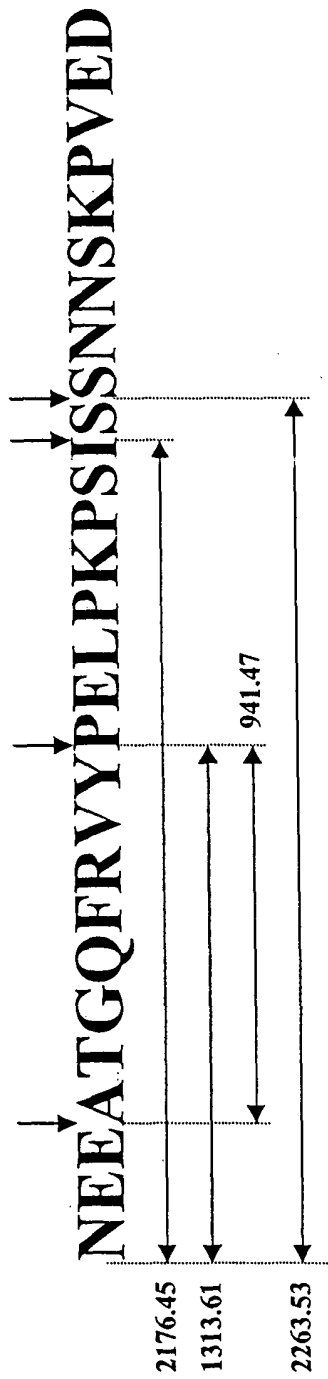


Figure 23

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CEA 225-251

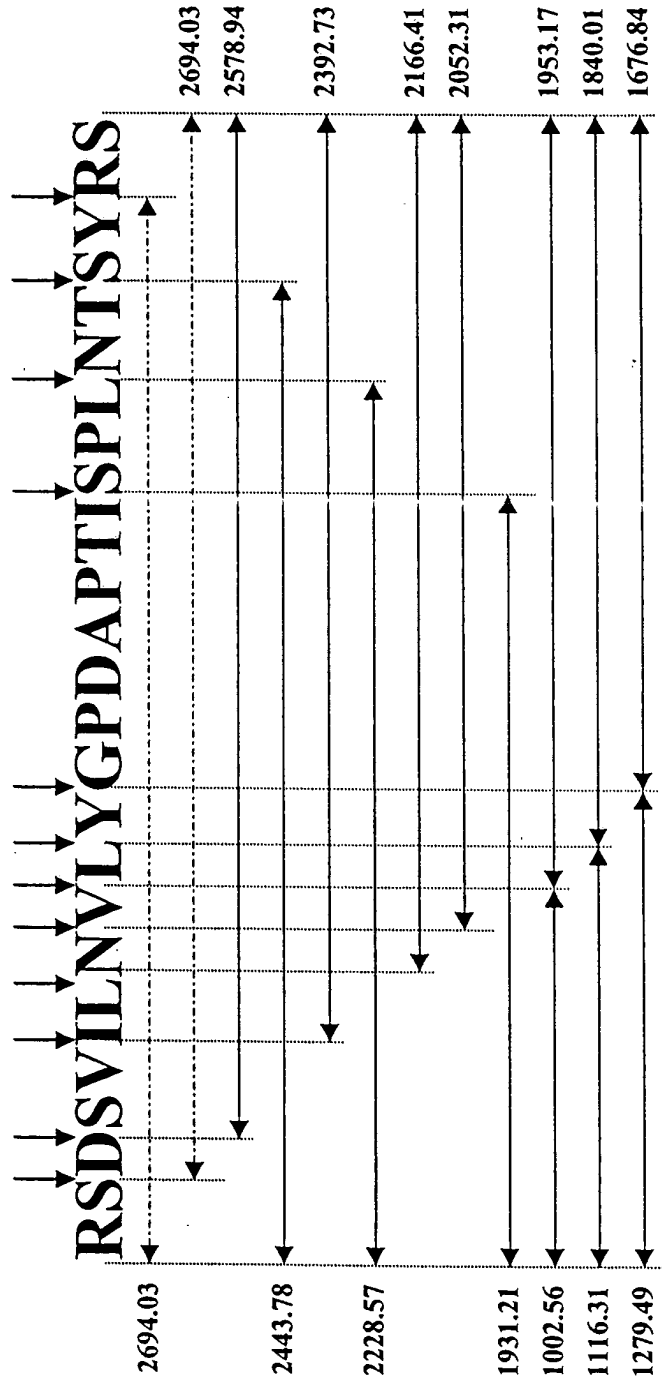


Figure 24

EPITOPE SEQUENCES

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CEA 239-270

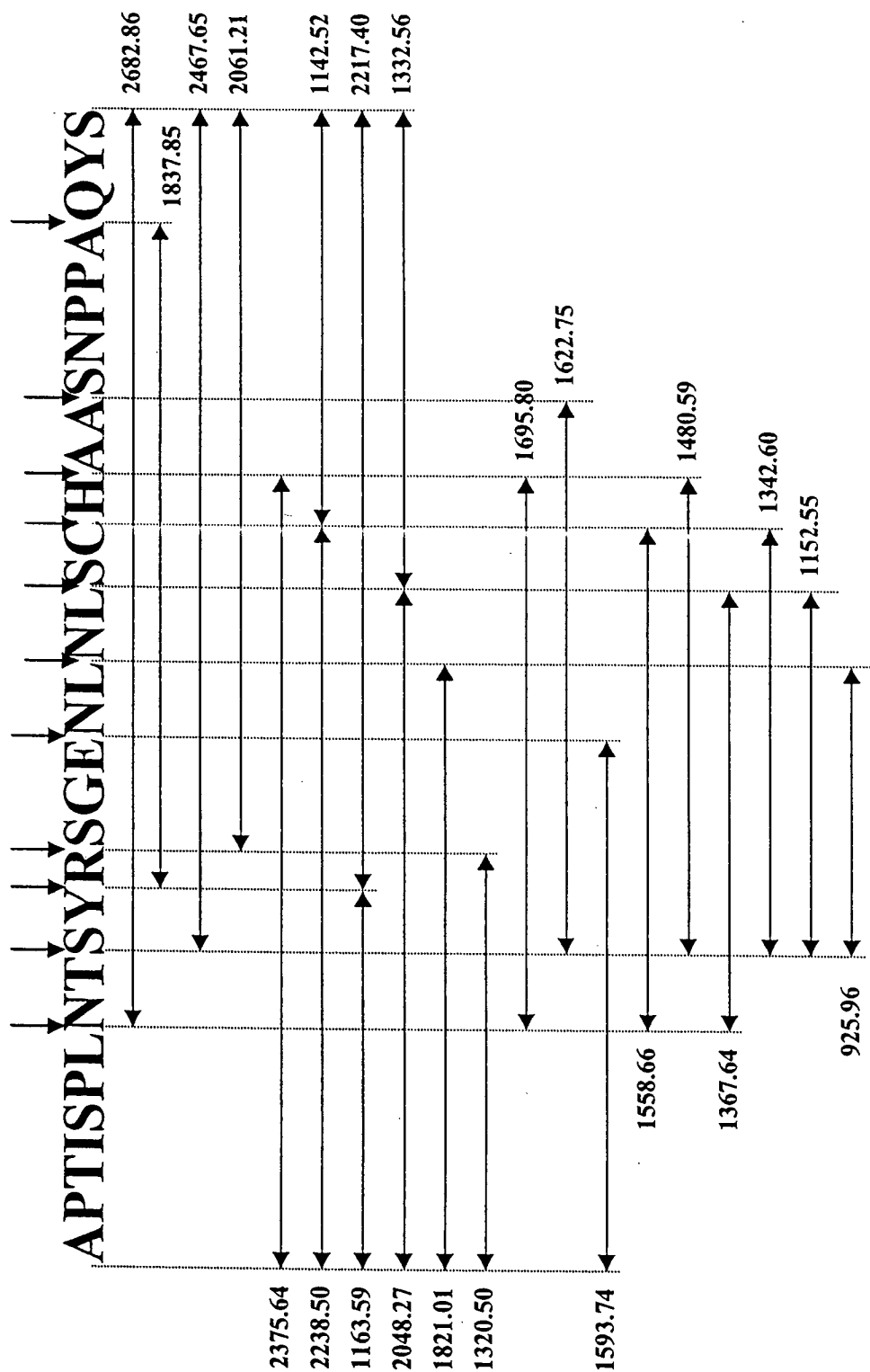


Figure 25

CEA 259-286

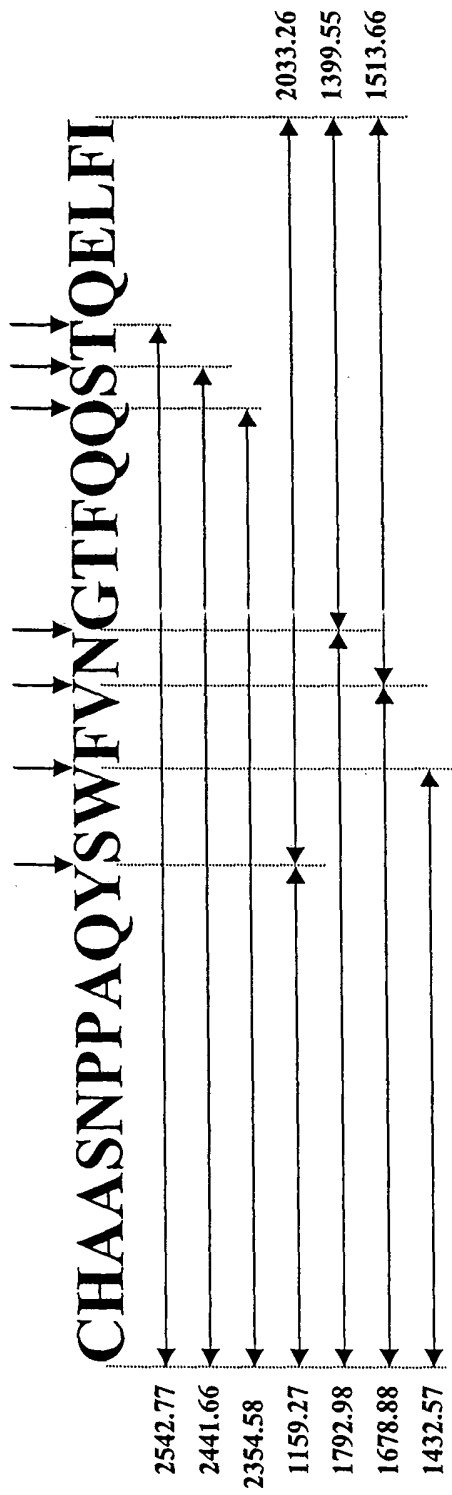


Figure 26

CEA 309-336

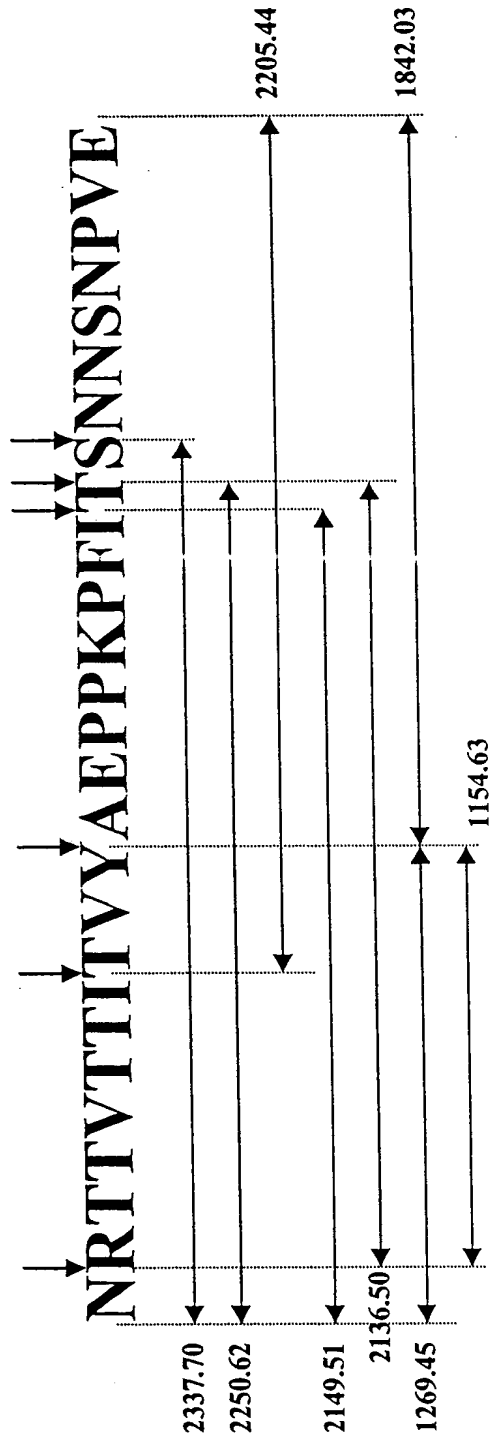


Figure 27

EPITOPE SEQUENCES

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Atty Docket: MANNK.032A

CEA 381-408

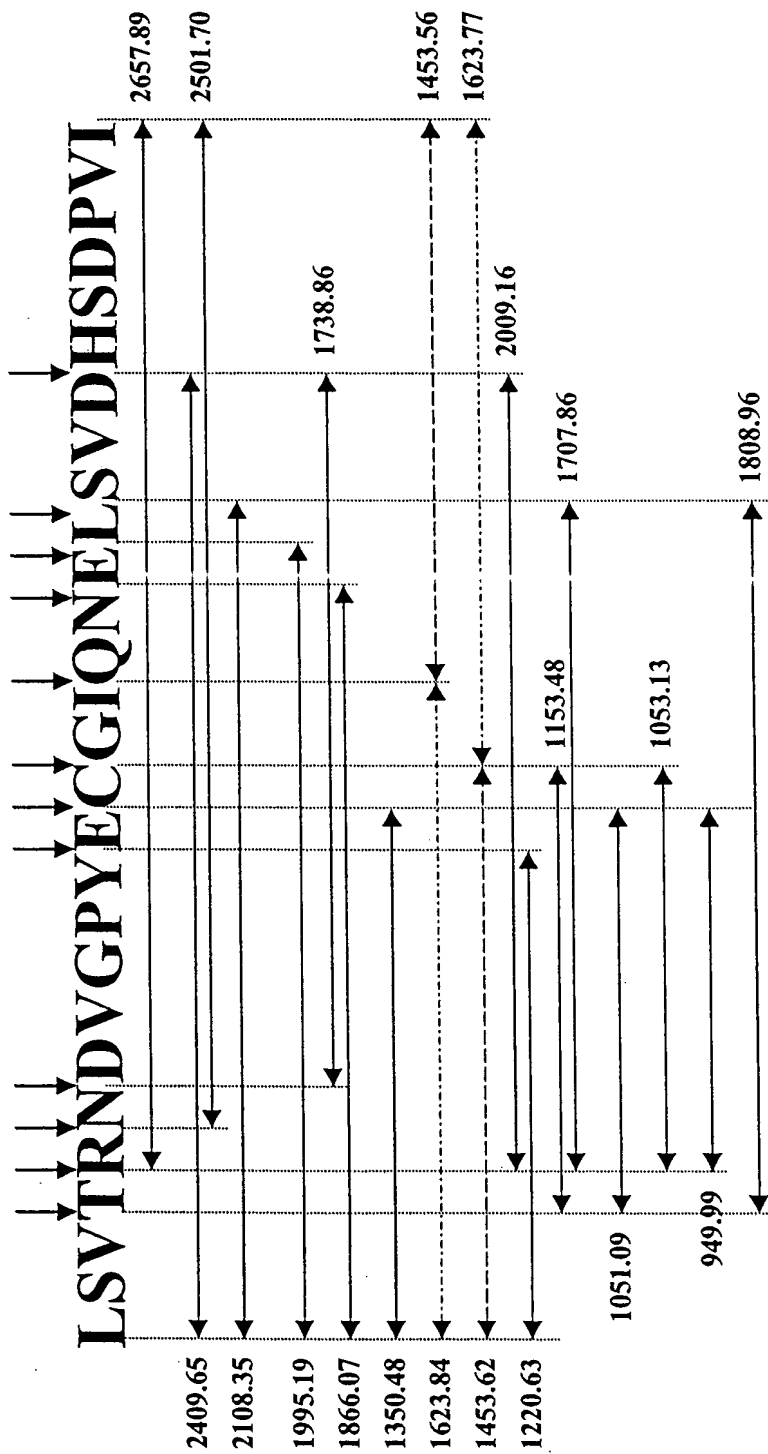


Figure 28

EPITOPE SEQUENCES

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Atty Docket: MANNK.032A

CEA 403-429

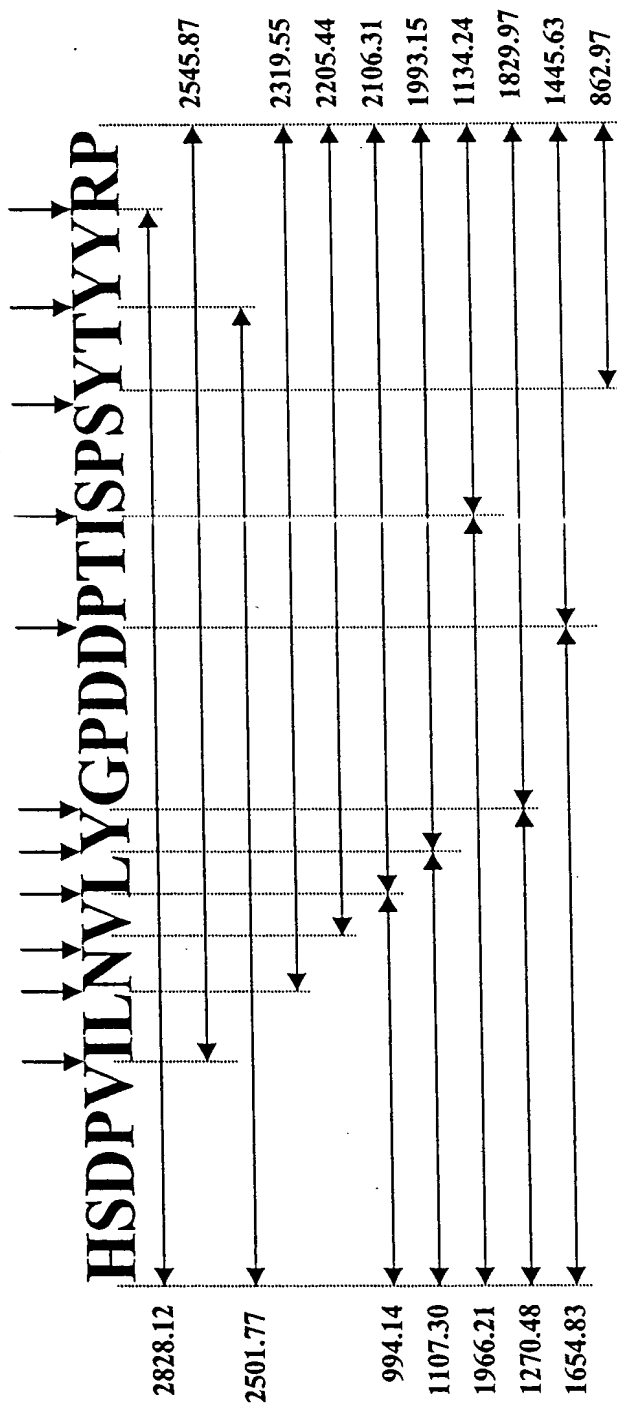


Figure 29

EPITOPE SEQUENCES

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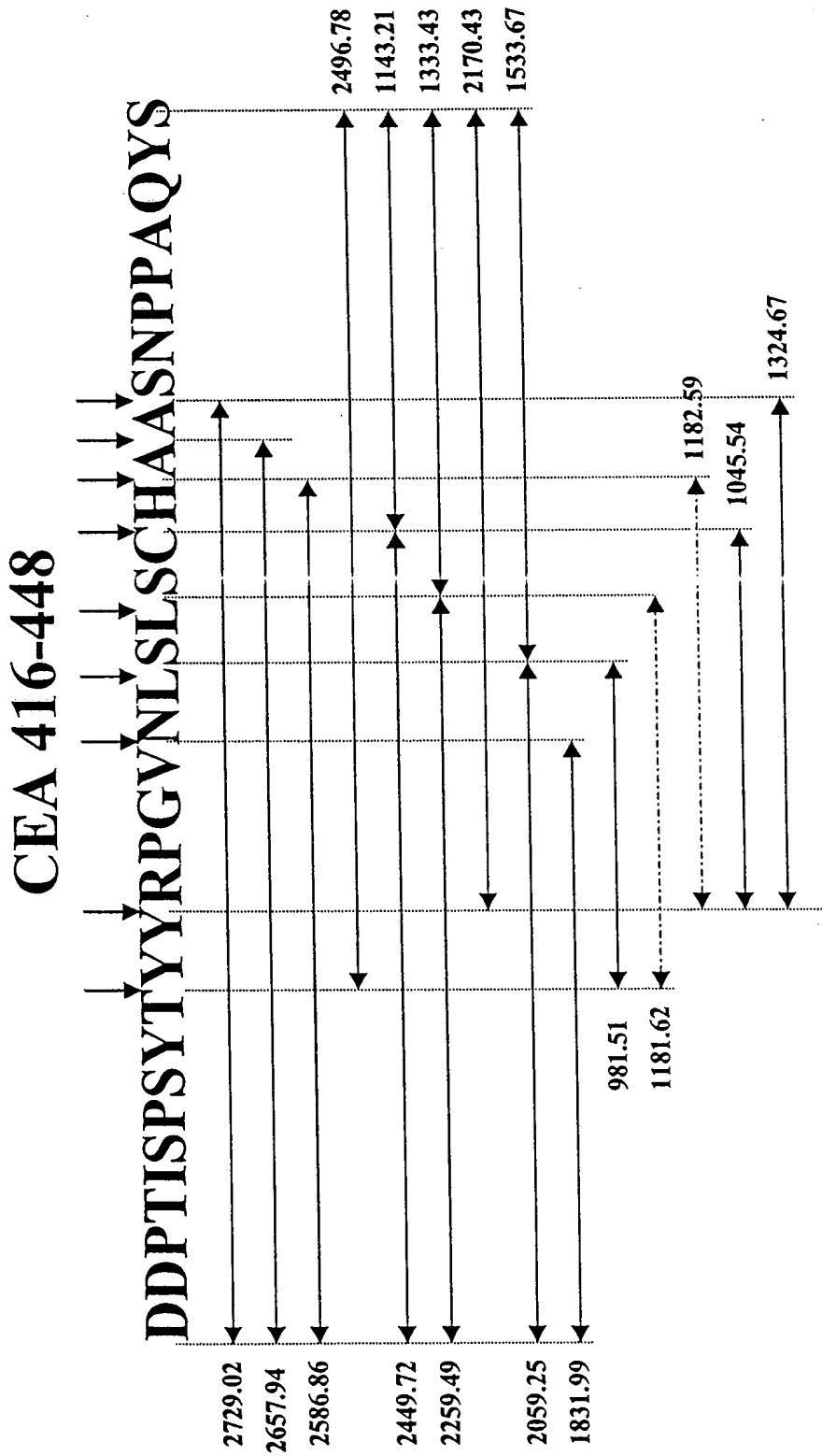


Figure 30

CEA 437-464

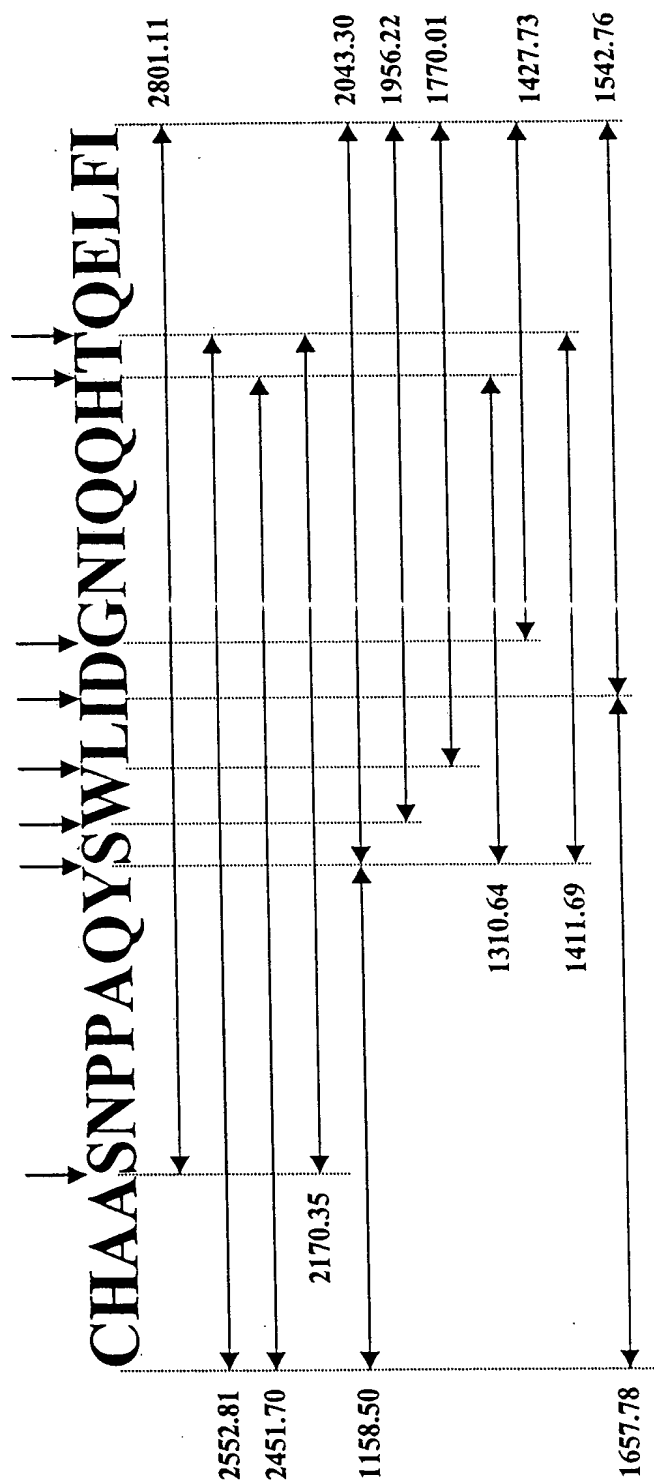


Figure 31

CEA 581-607

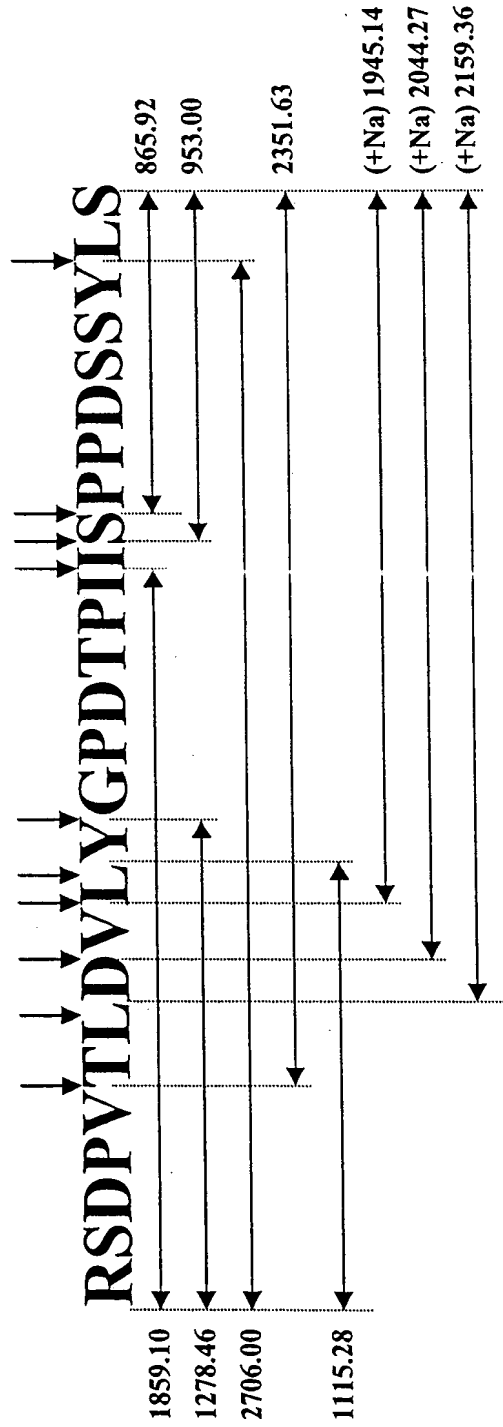


Figure 32

CEA 595-622

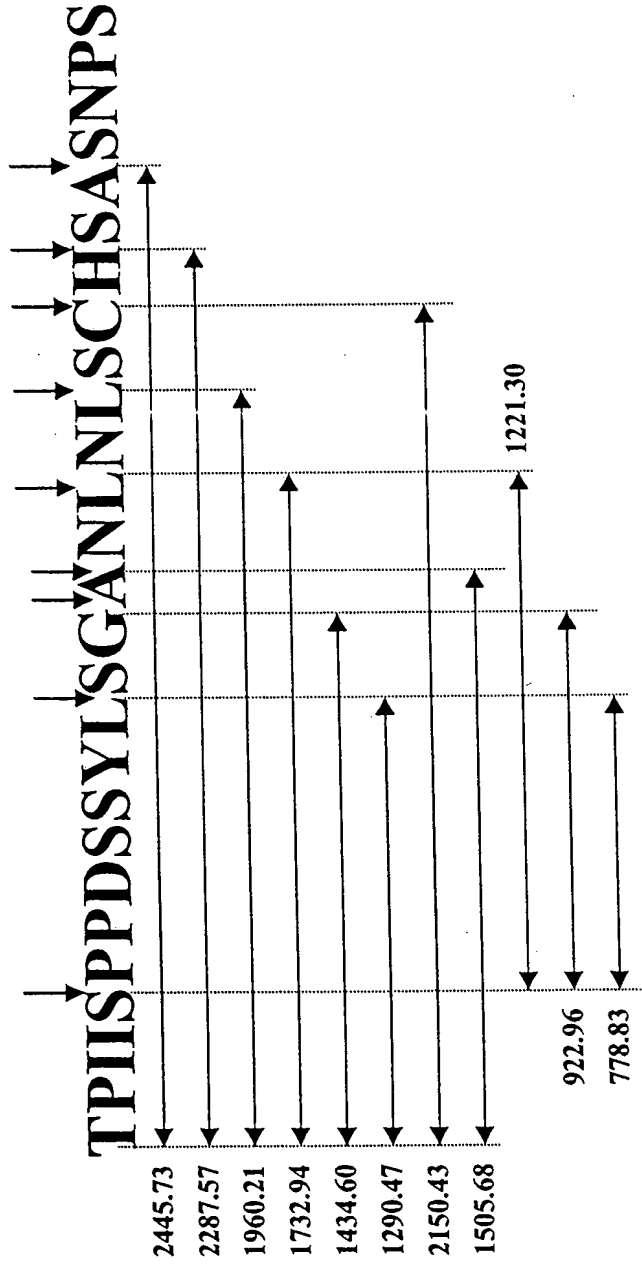


Figure 33

EPITOPE SEQUENCES

Simard et al.

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CEA 615-641

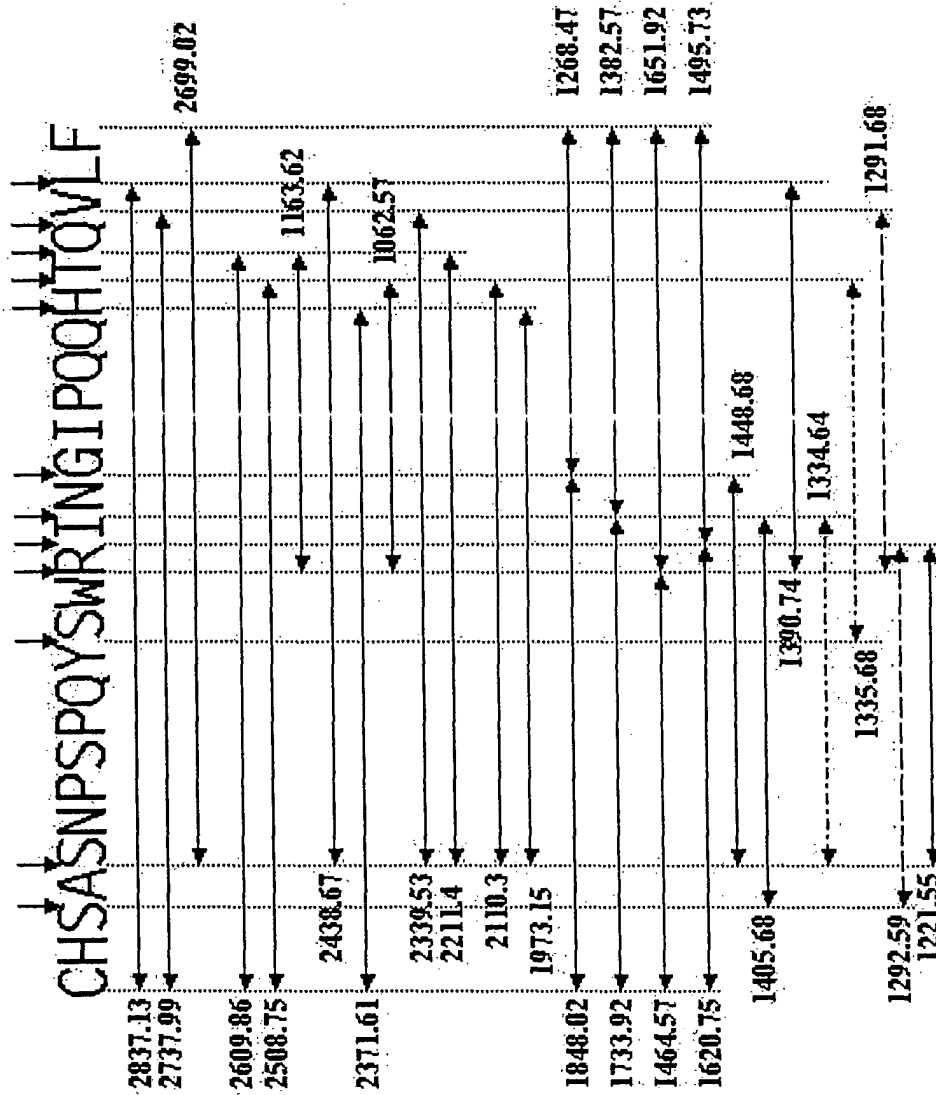


Figure 34

CEA 643-677

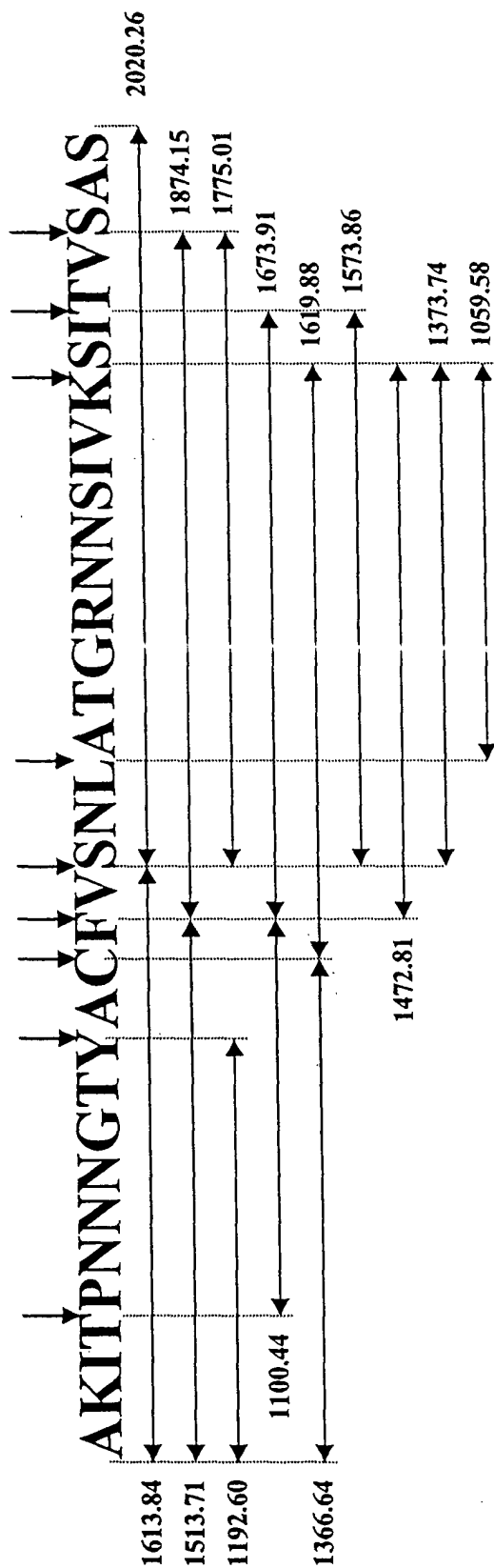


Figure 35

GAGE-1 (6-32) 30 min

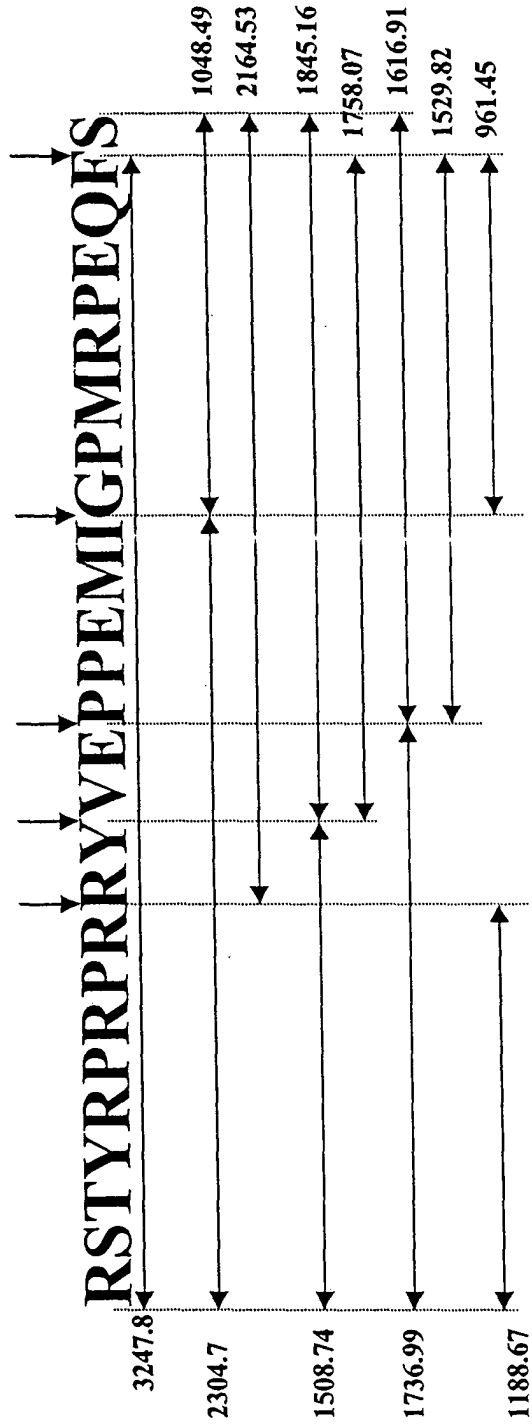


Figure 36

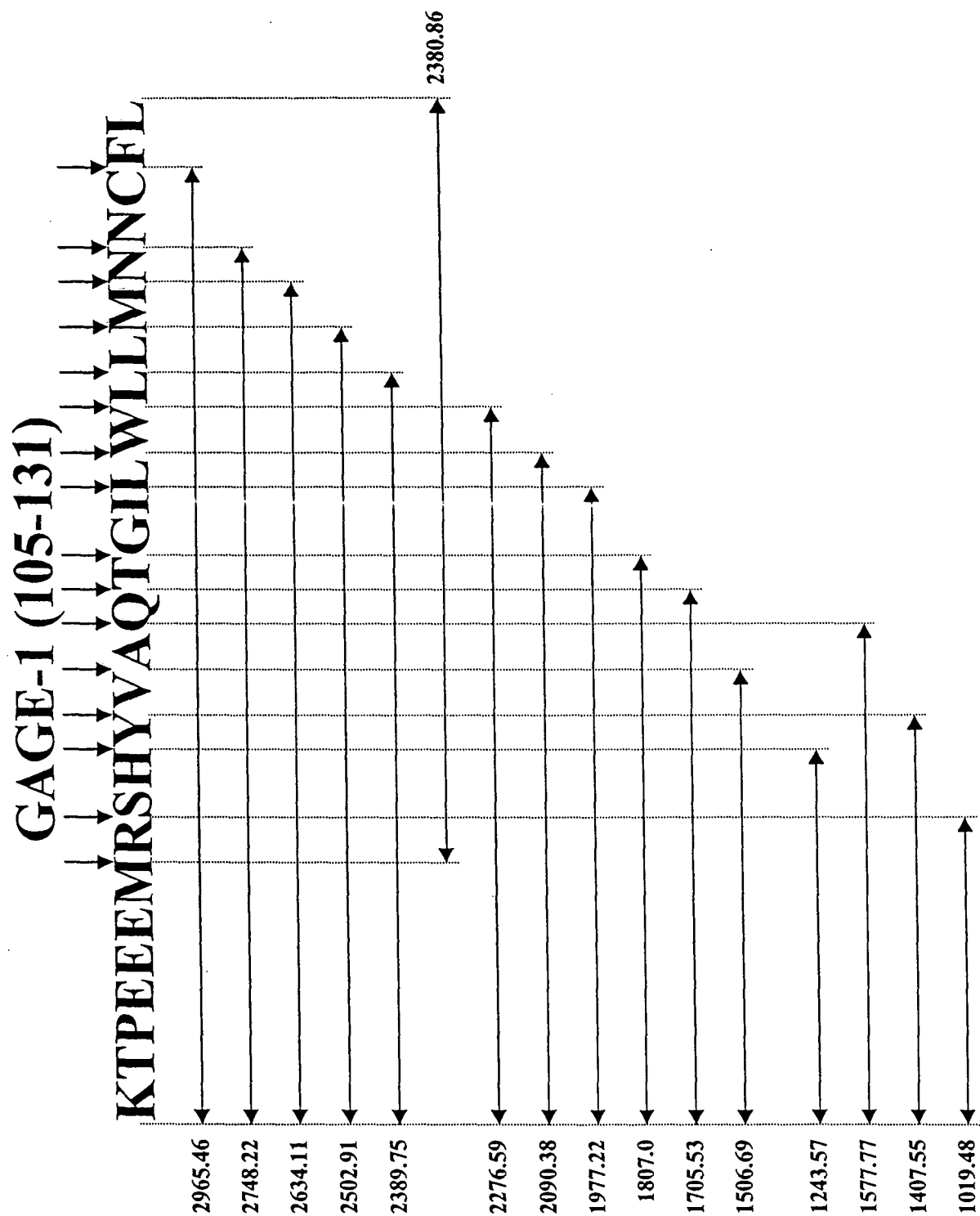


Figure 37

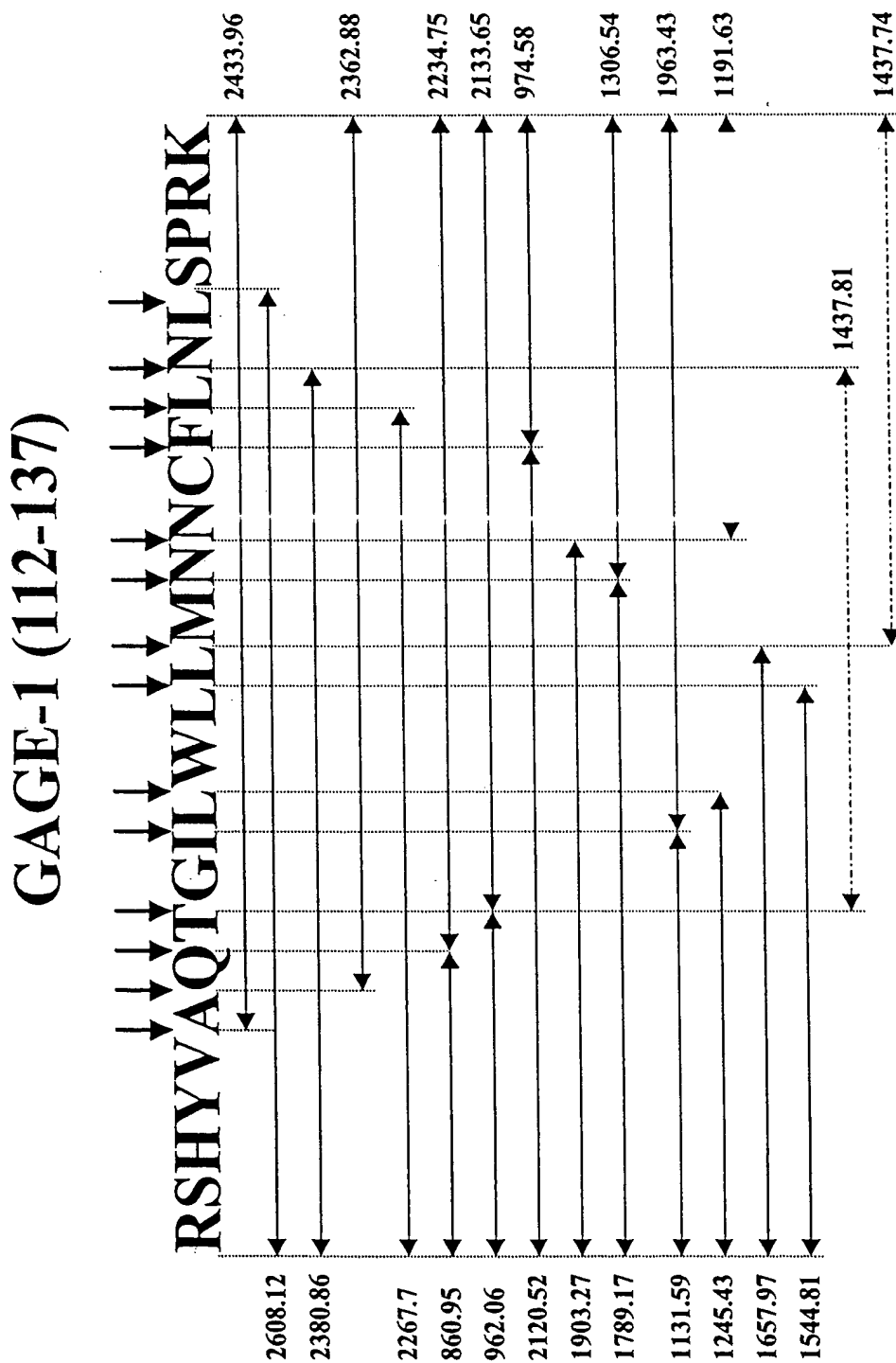


Figure 38

MAGE-1 (51-77)

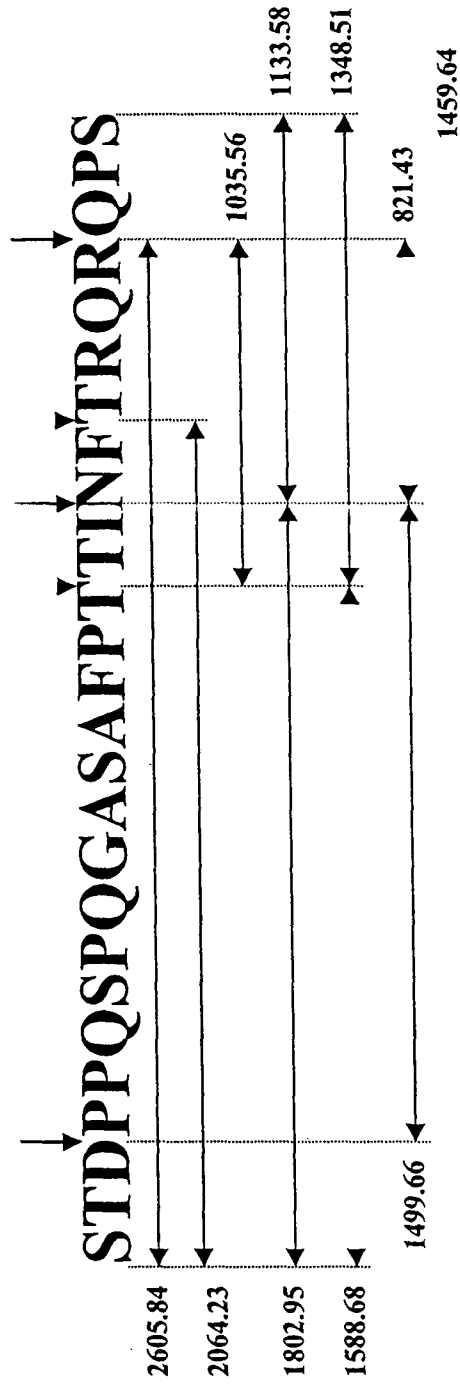


Figure 39

MAGE-1 (126-153)

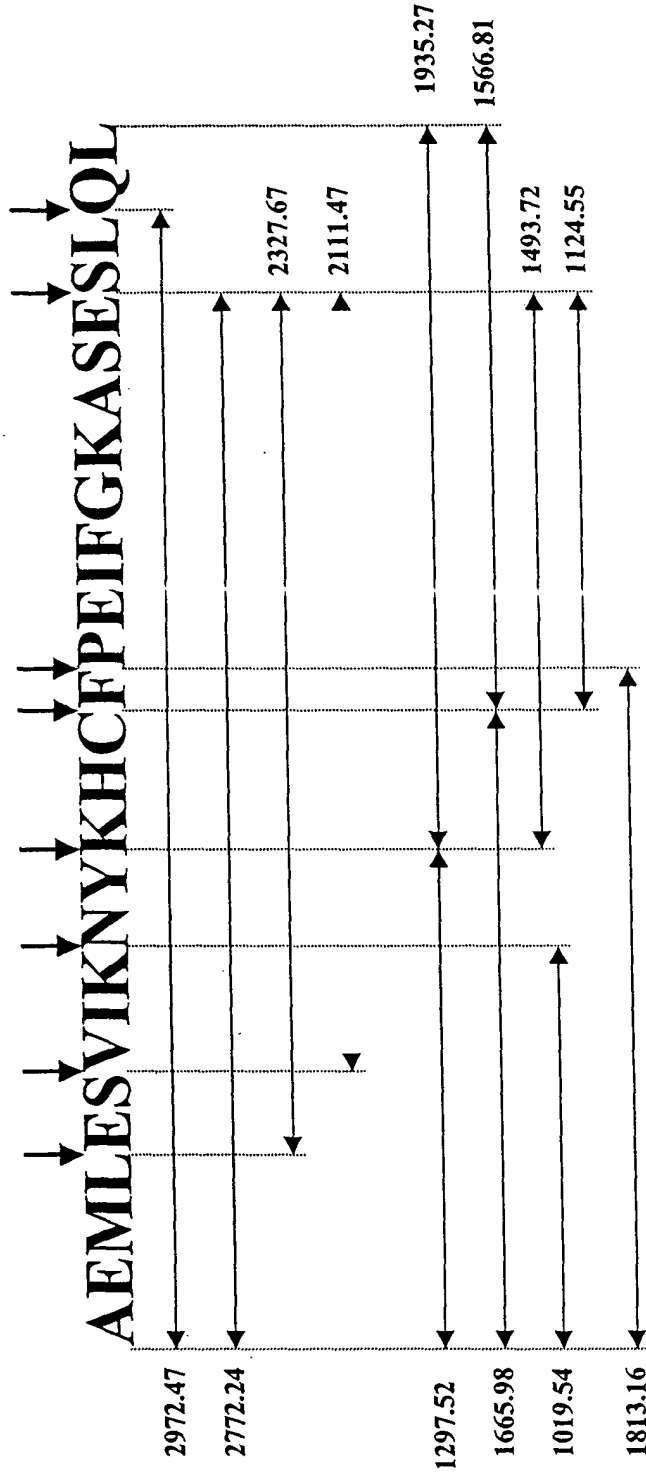


Figure 40

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MAGE-2 (272-299)

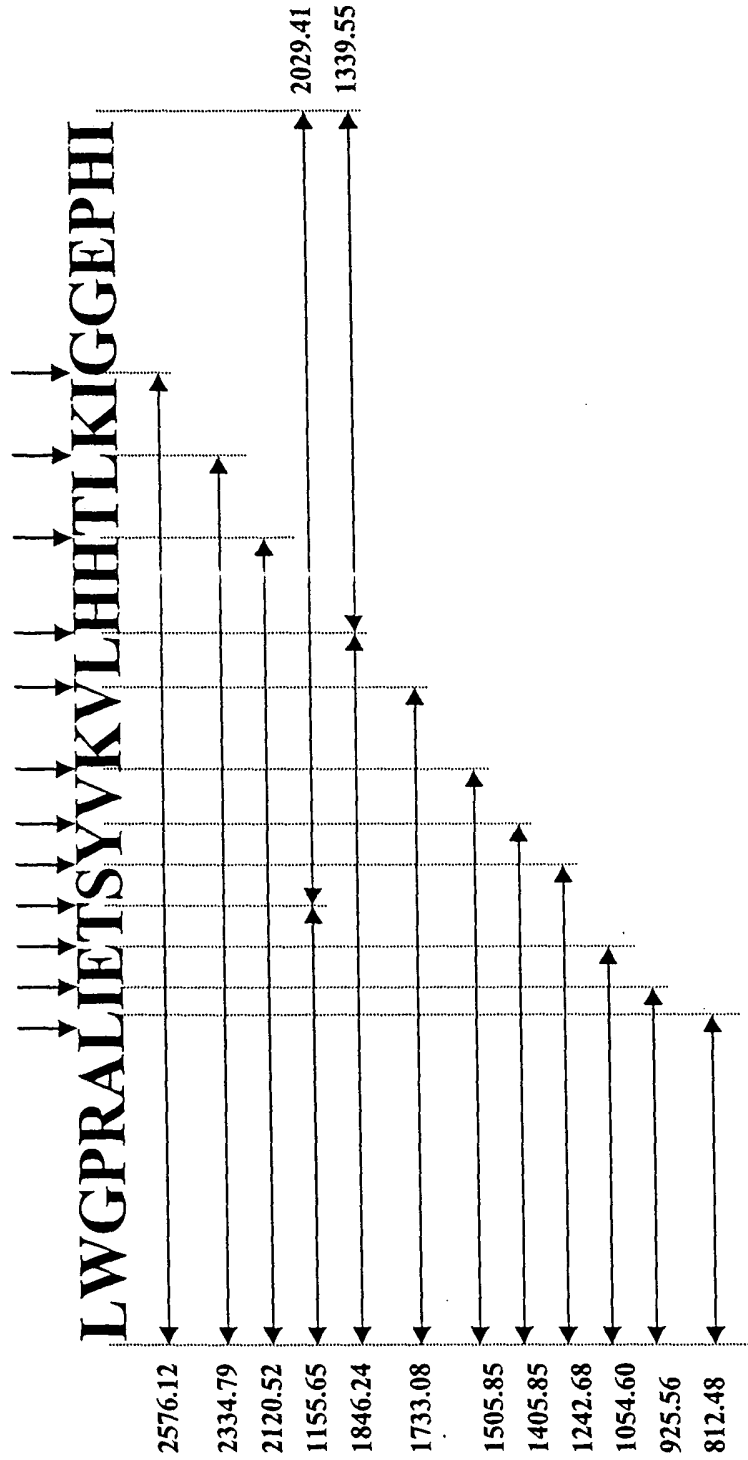


Figure 41

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MAGE-2 (287-314)

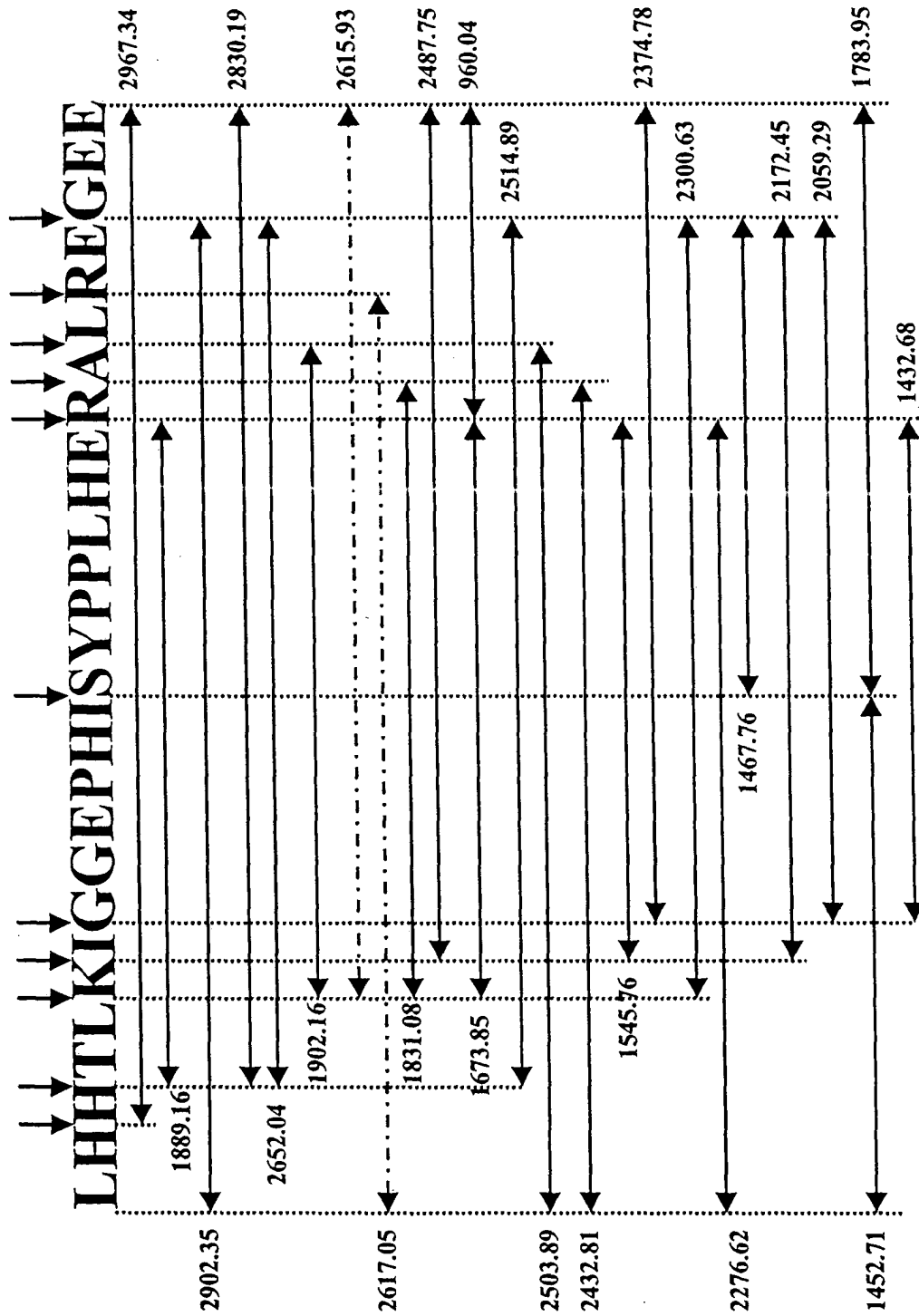


Figure 42

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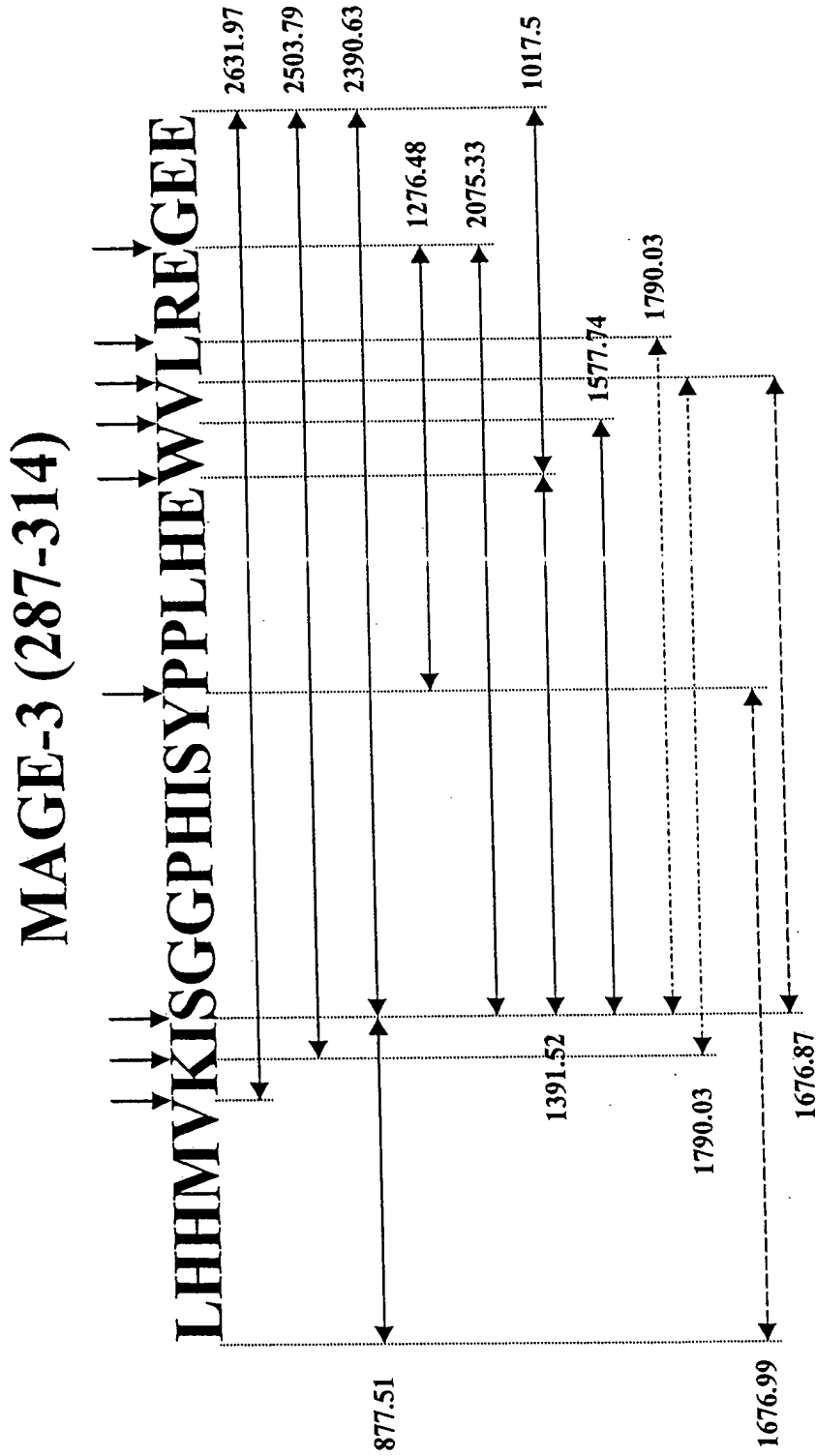


Figure 43

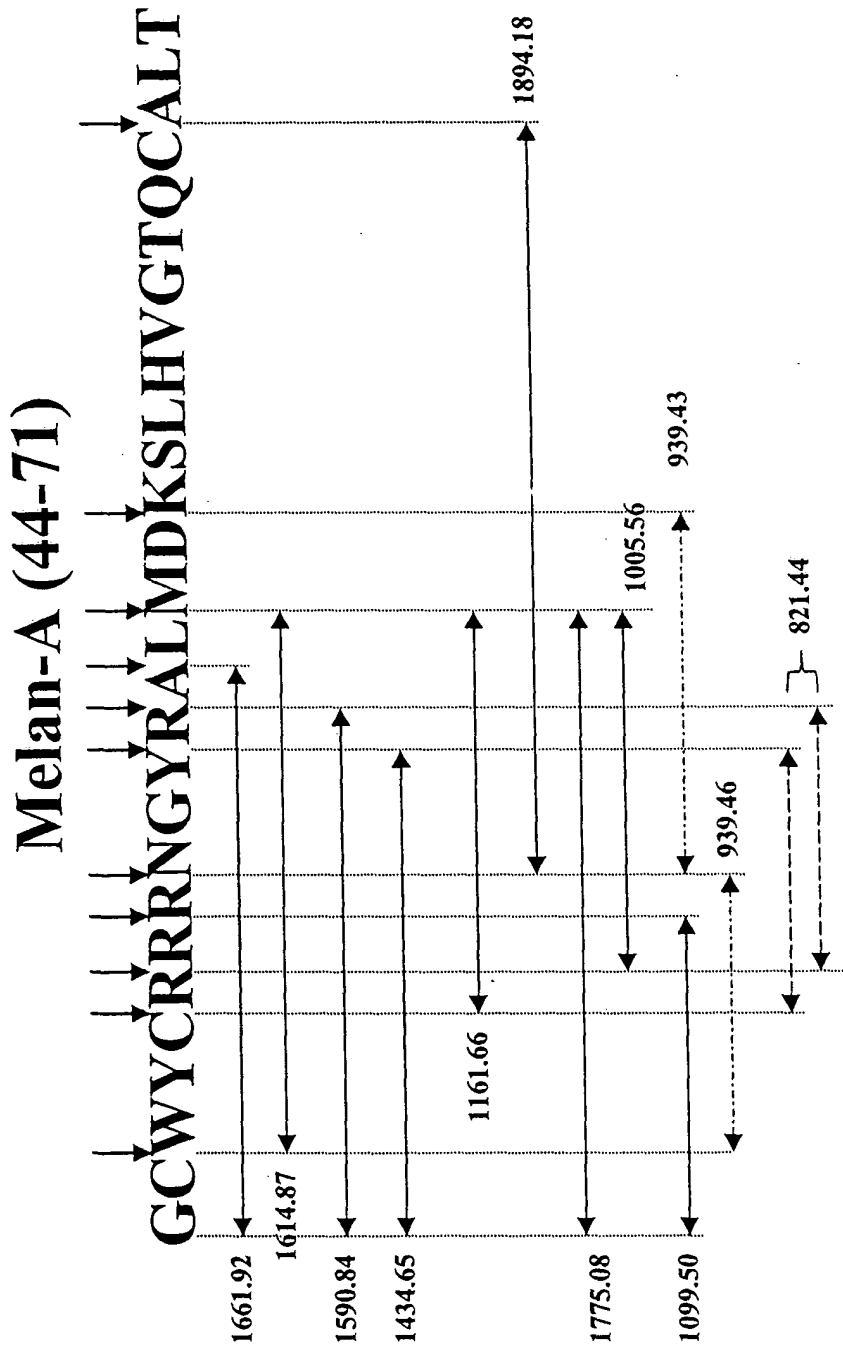


Figure 44

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PRAME (274-301)

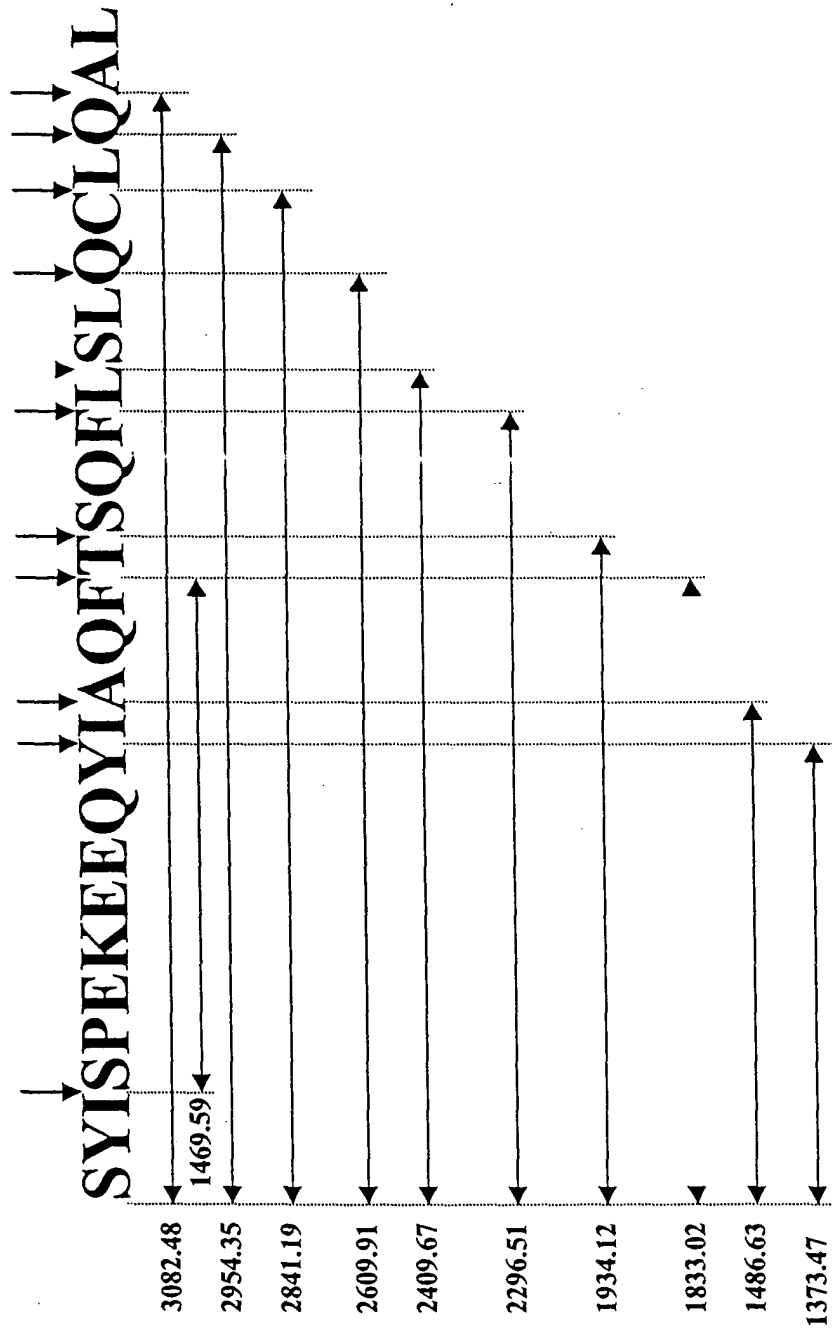


Figure 45

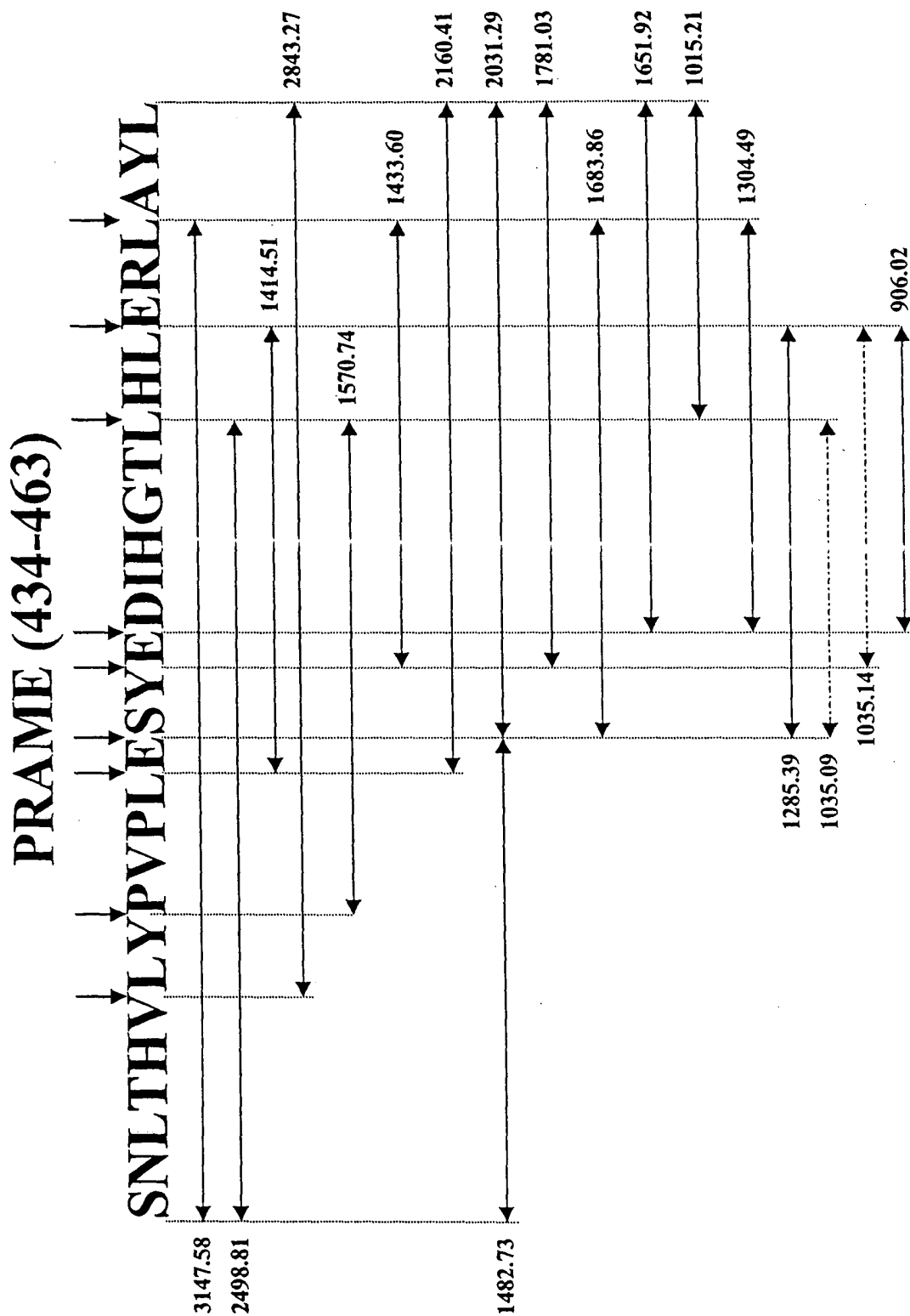


Figure 46

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PRAME (452-480)

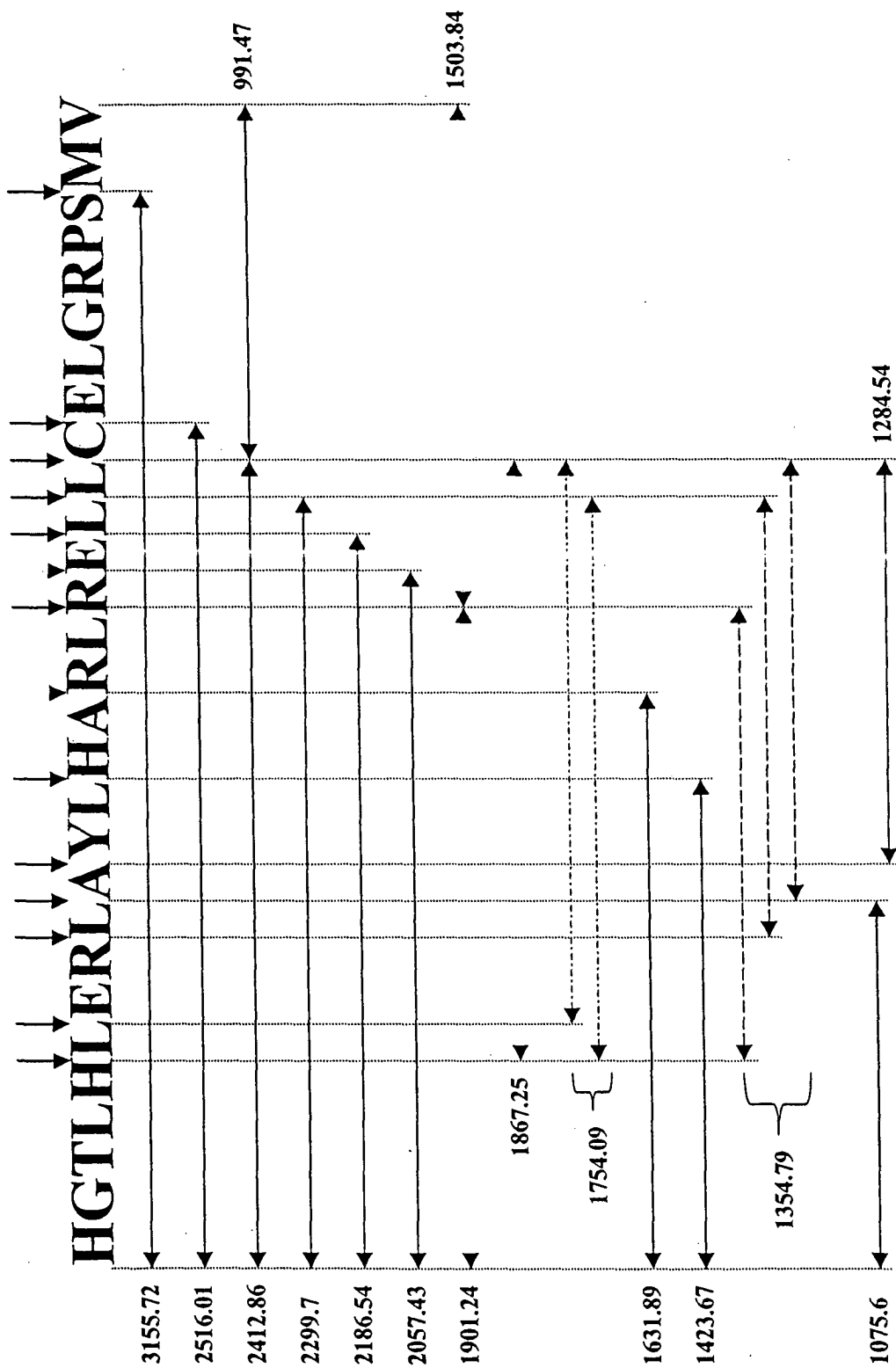


Figure 47

PSA (143-169)

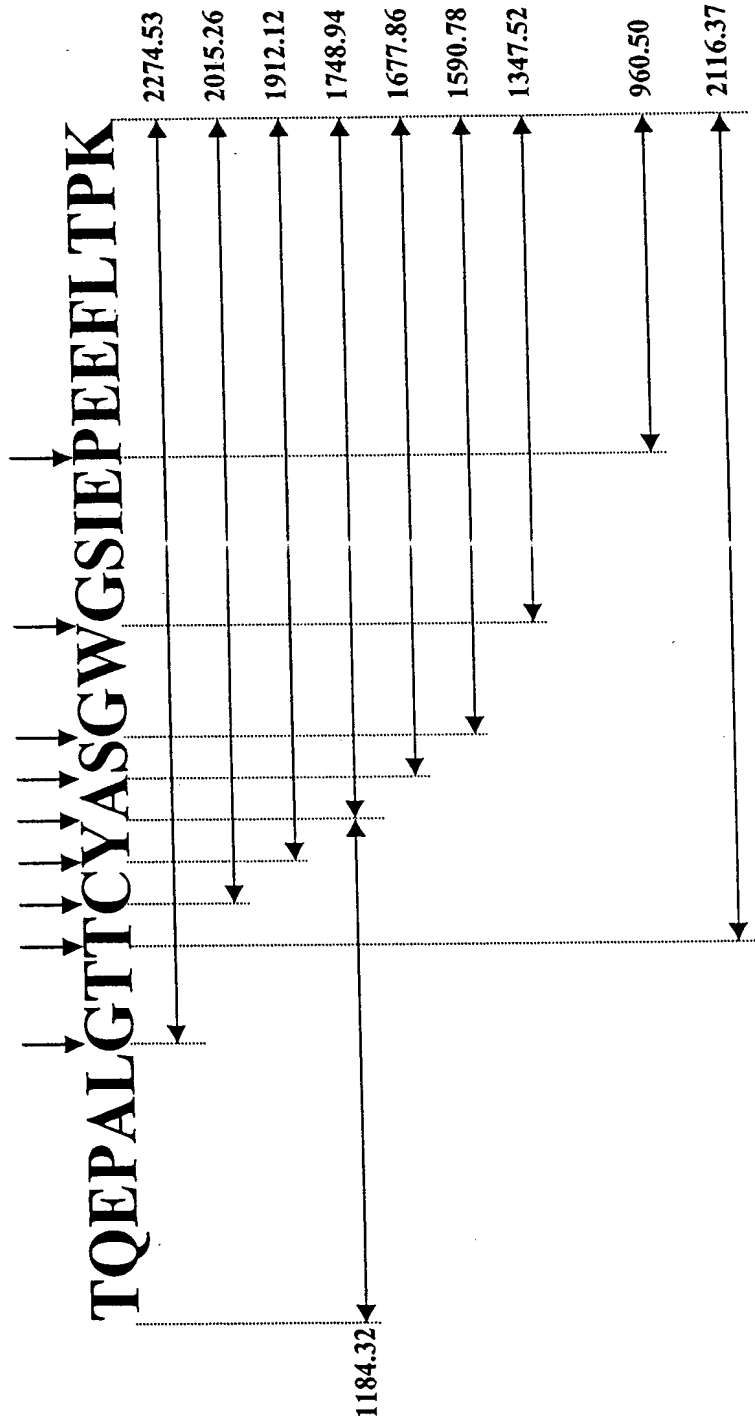


Figure 48

EPITOPE SEQUENCES

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Appl. No.: Unknown Atty Docket: MANNK.032A

PSA 156-188

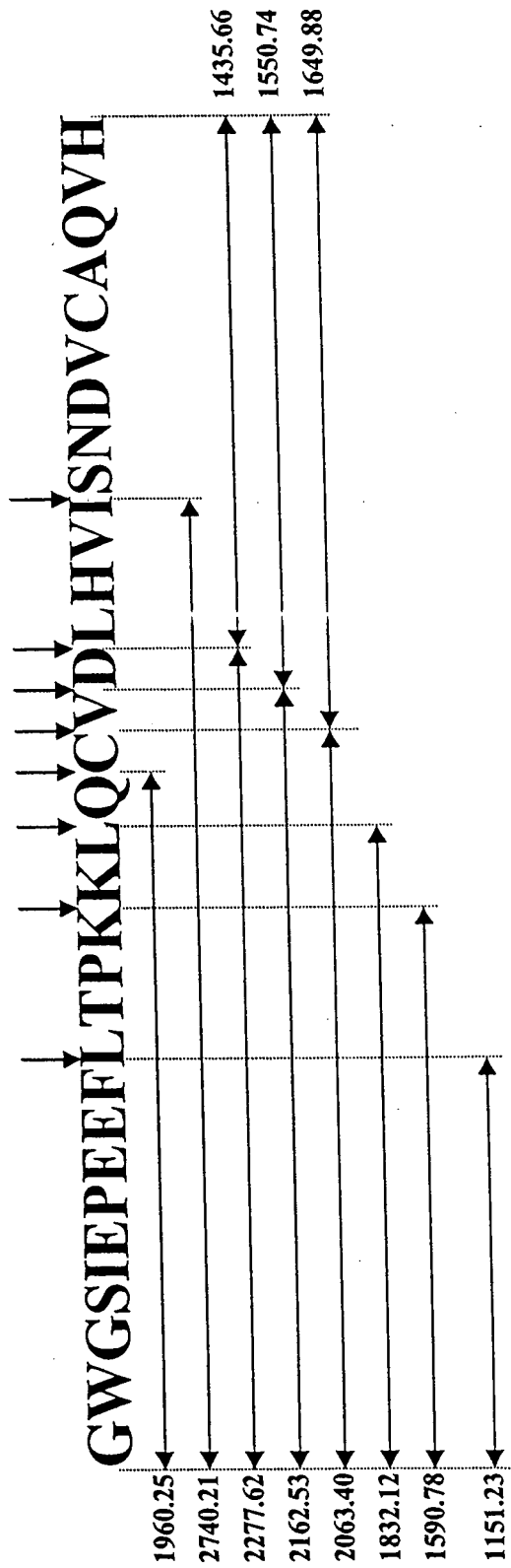


Figure 49

PSCA 67-94

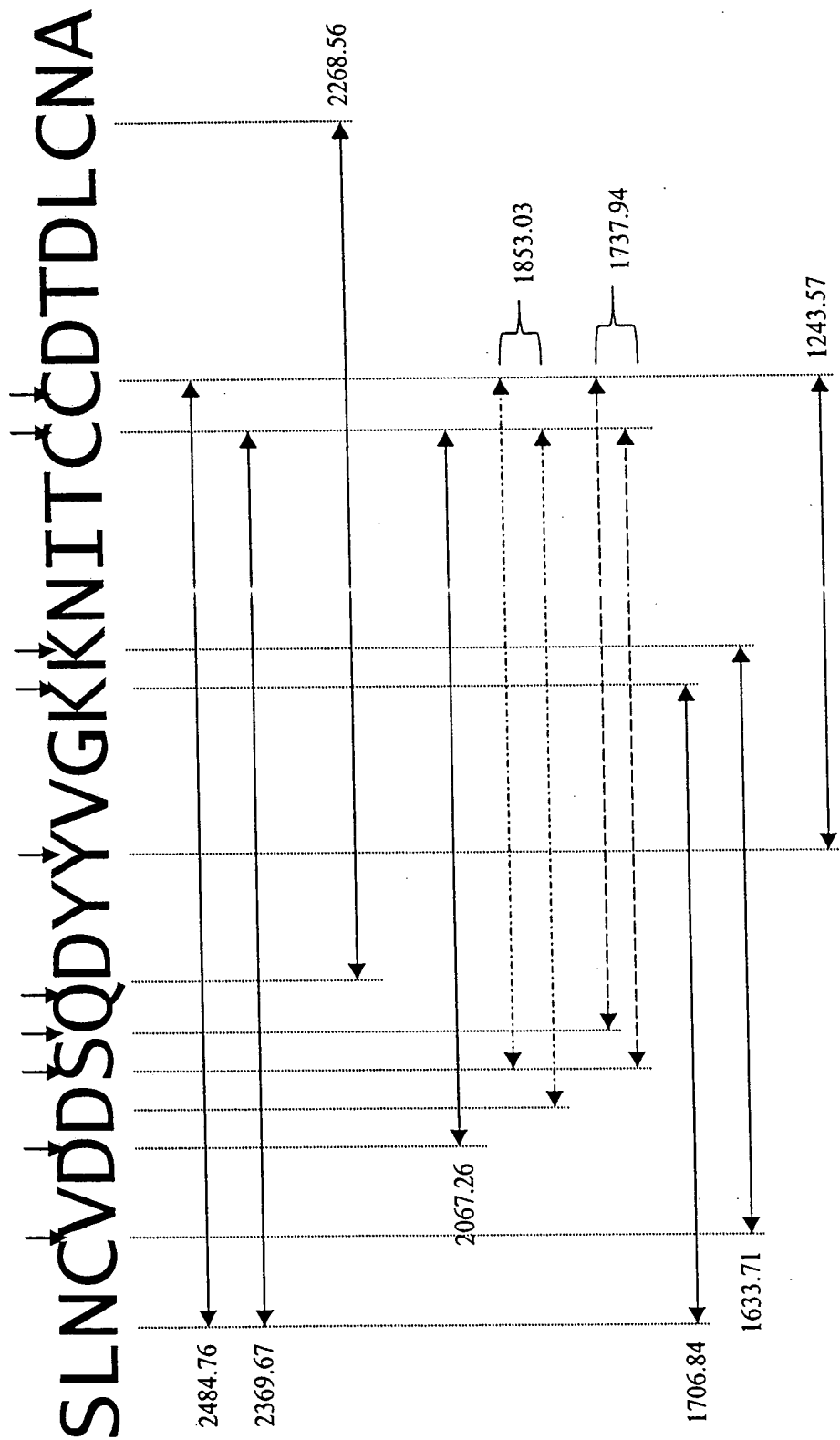


Figure 50

EPITOPE SEQUENCES

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PSMA (378-405)

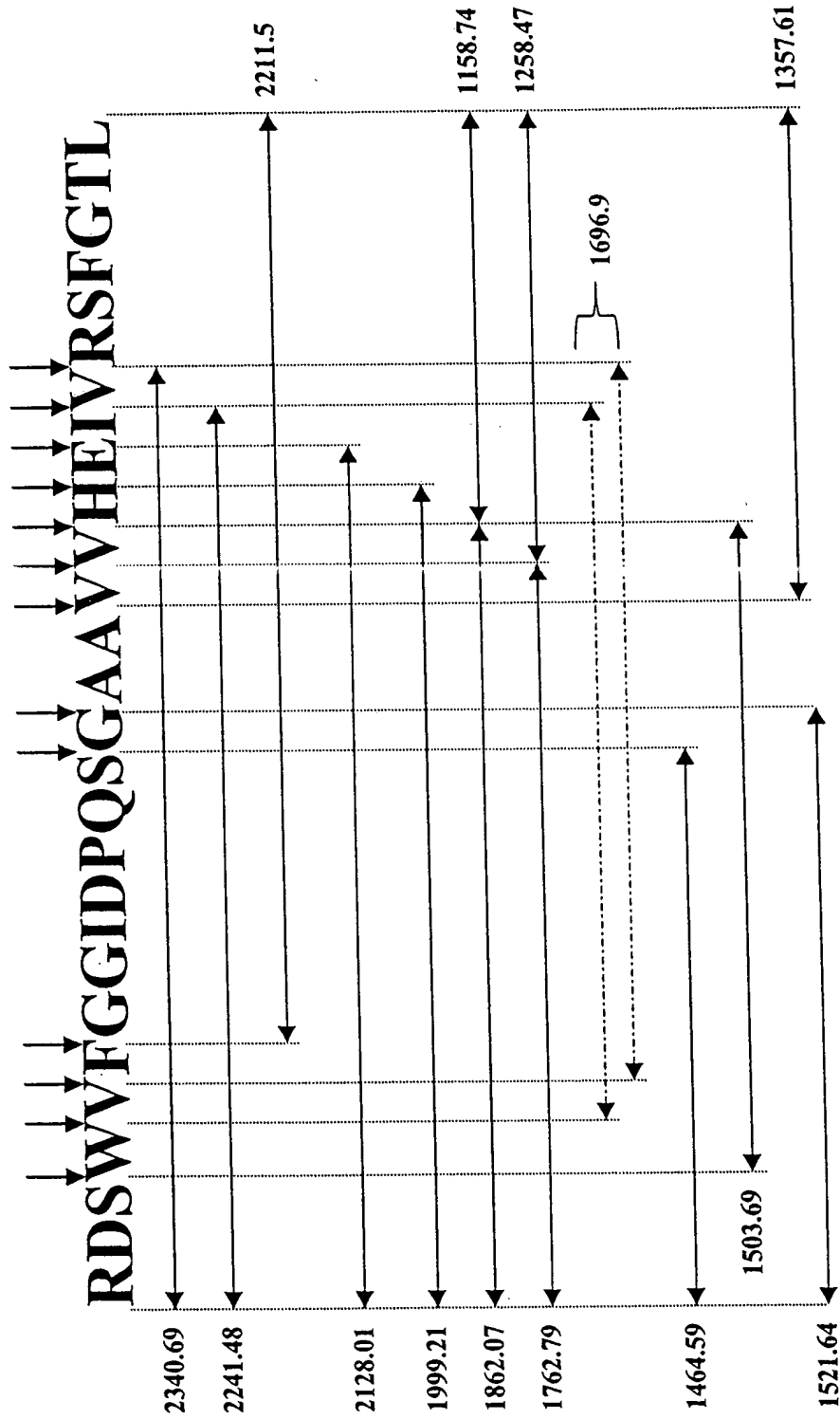


Figure 51

EPITOPE SEQUENCES

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PSMA (597-623)

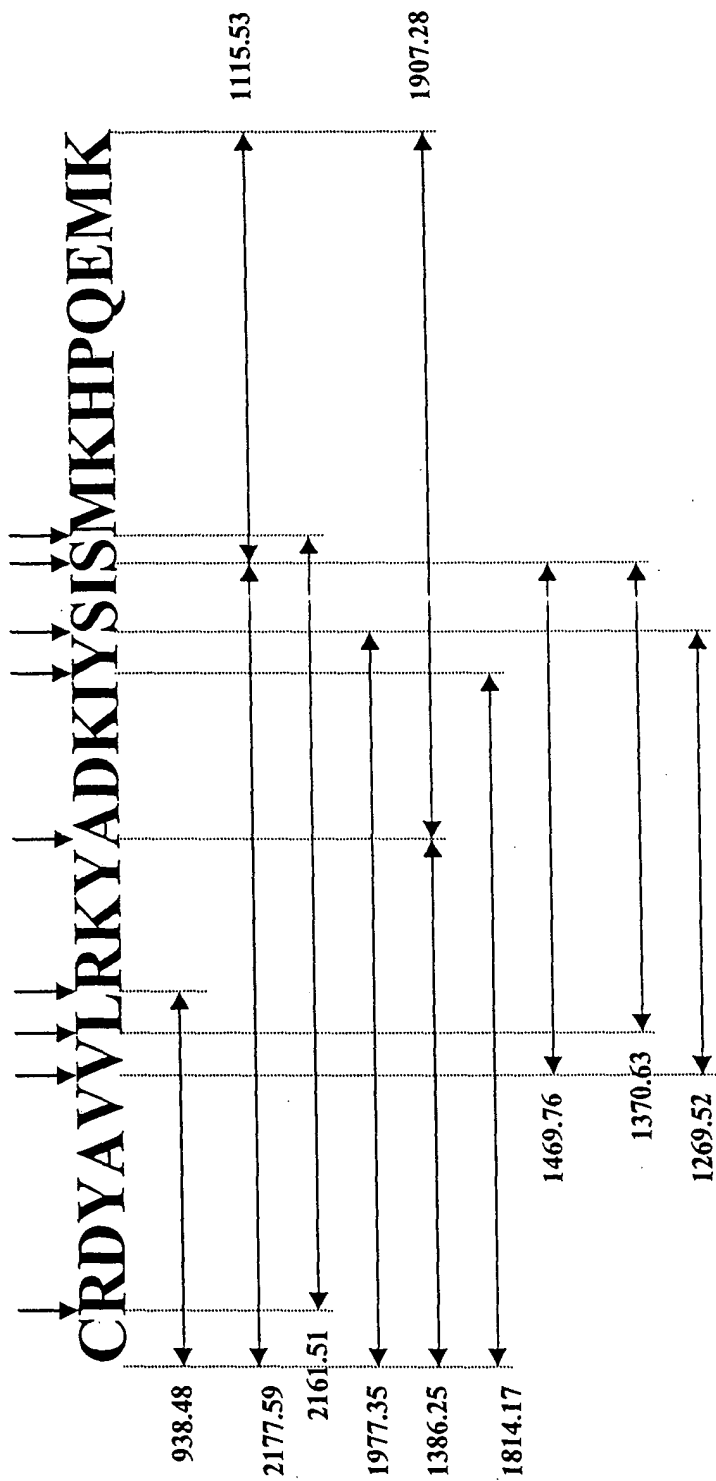


Figure 52

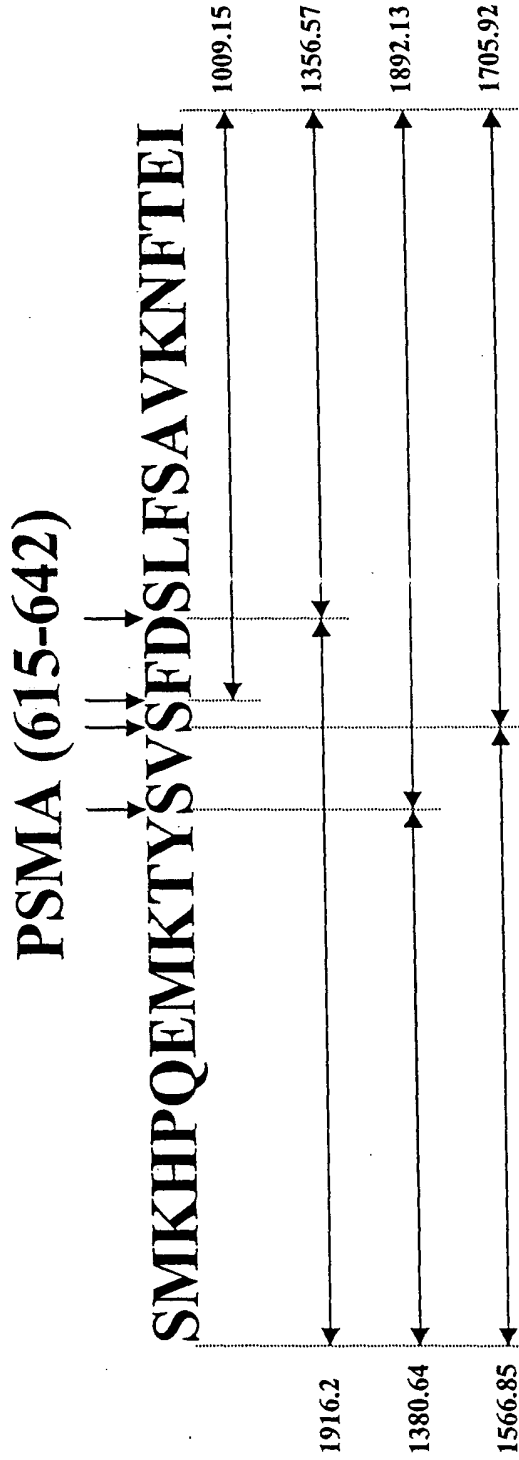


Figure 53

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (57-86)

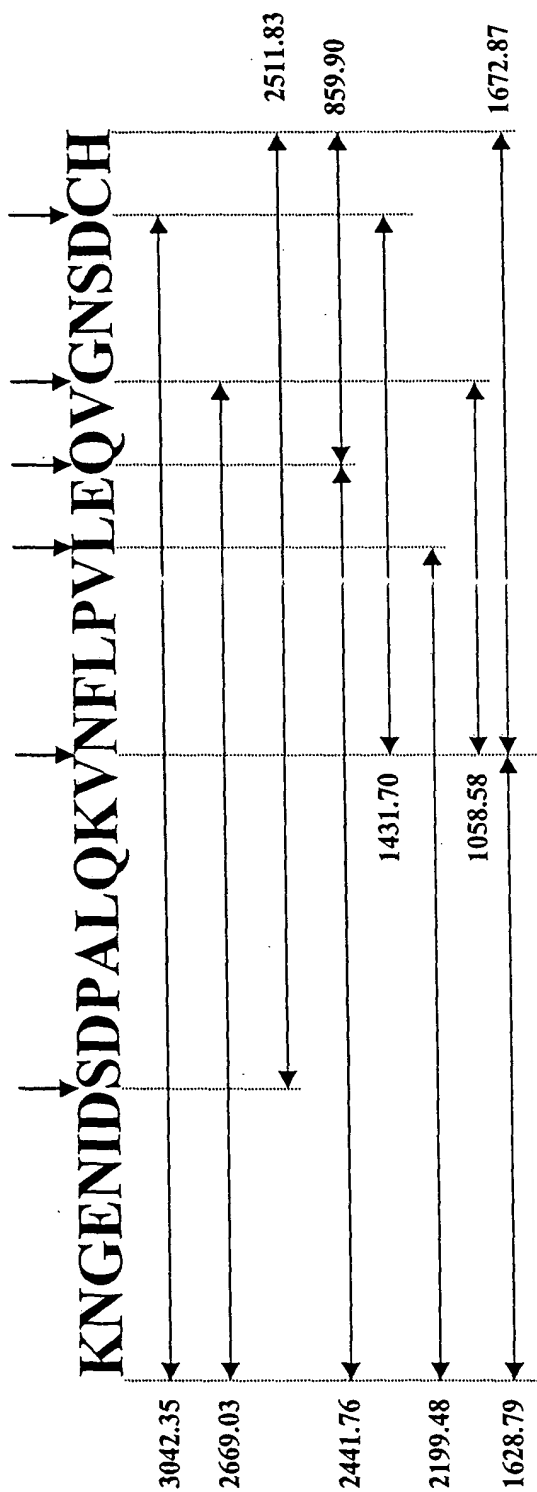


Figure 54

SCP-1 (201-227)

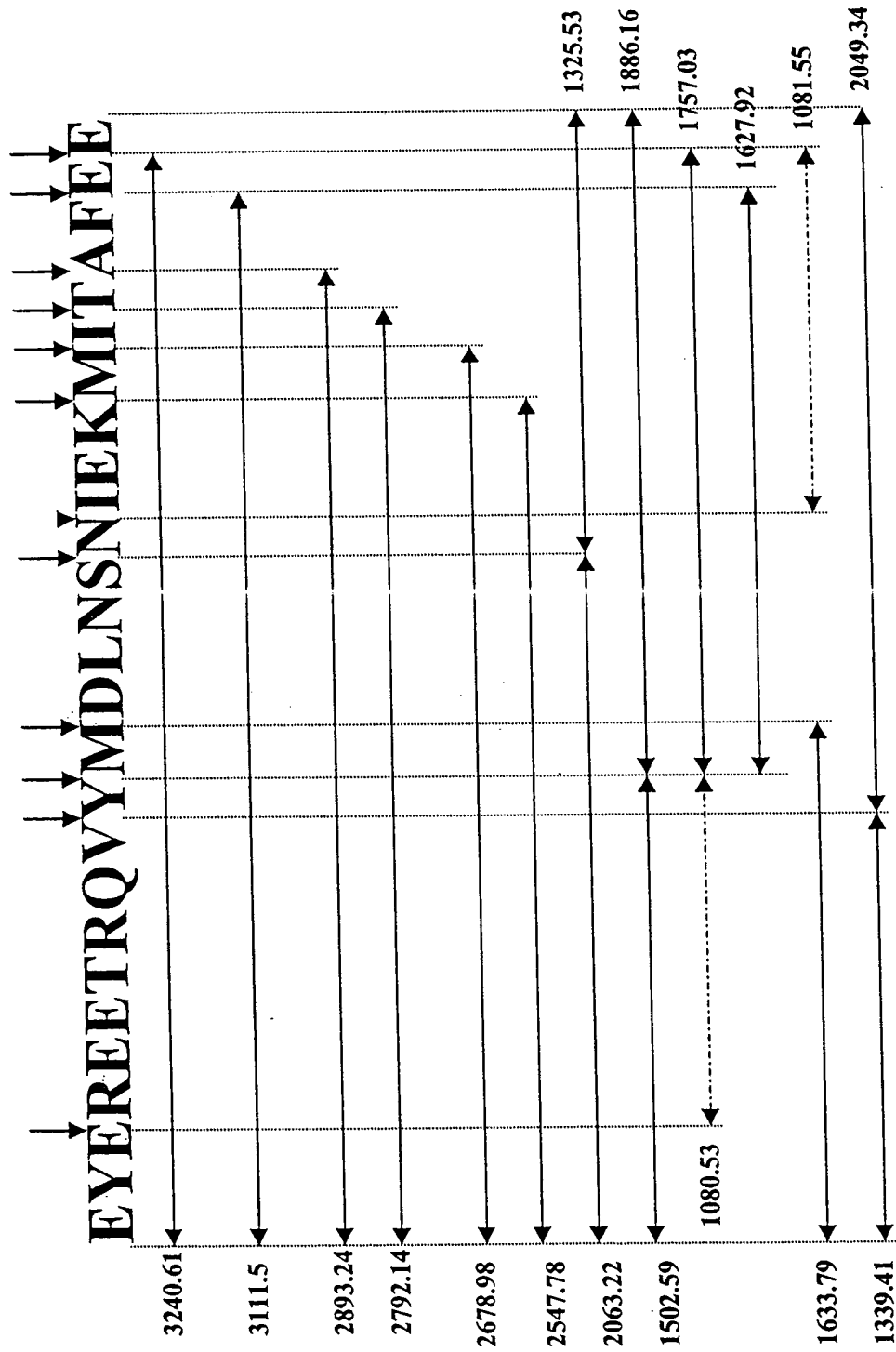


Figure 55

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (395-424)

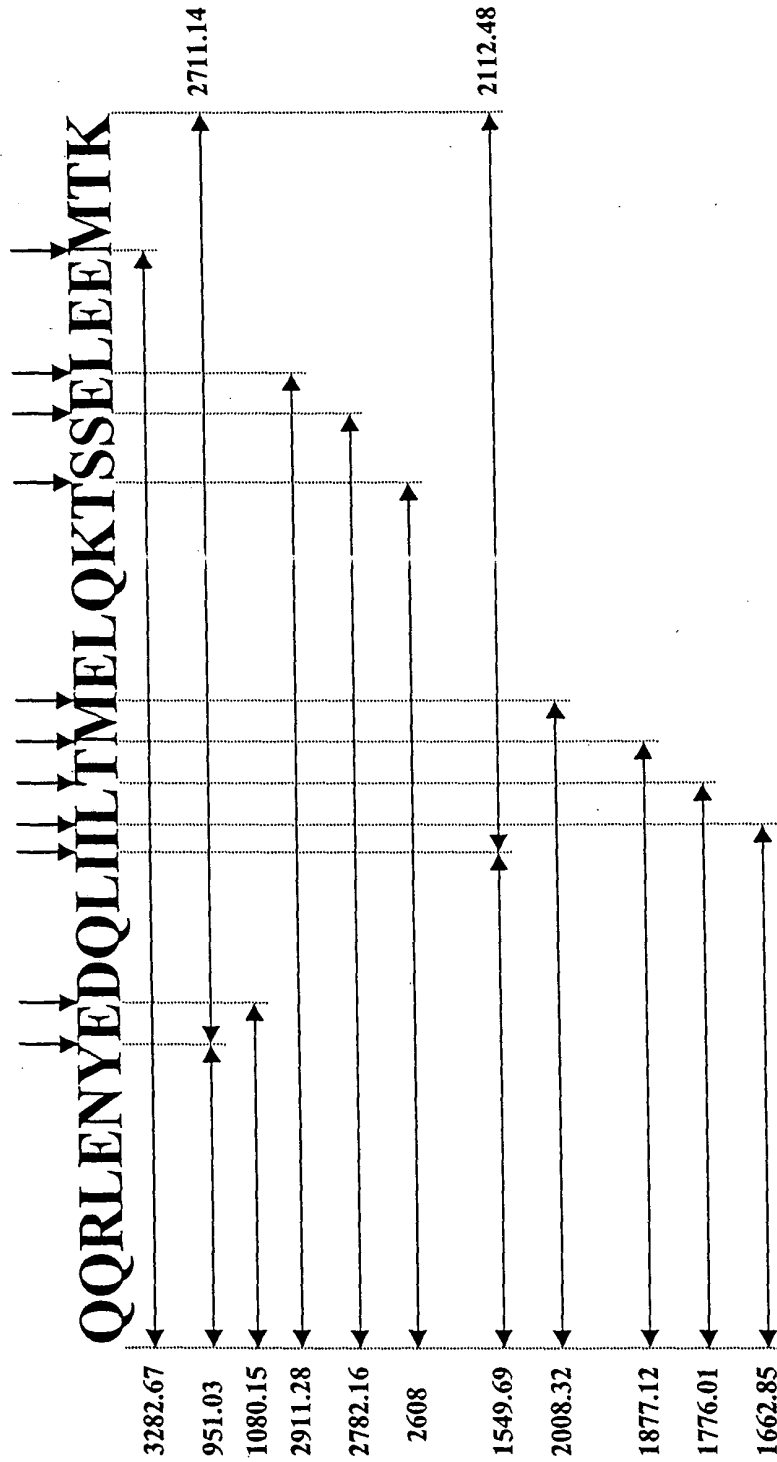


Figure 56

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (416-442)

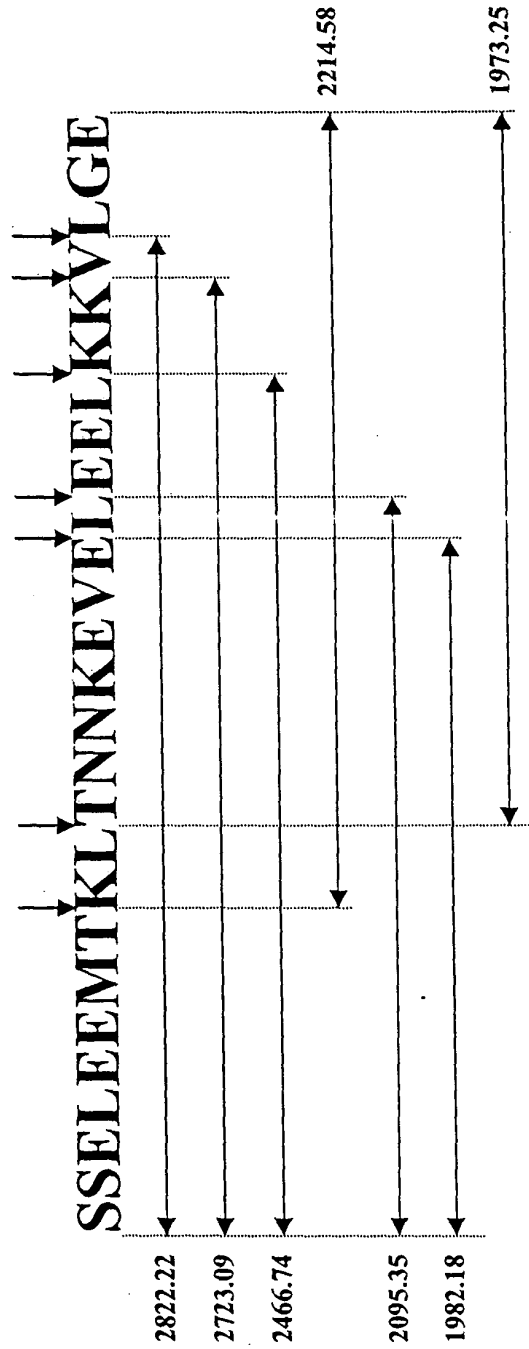


Figure 57

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (518-545)

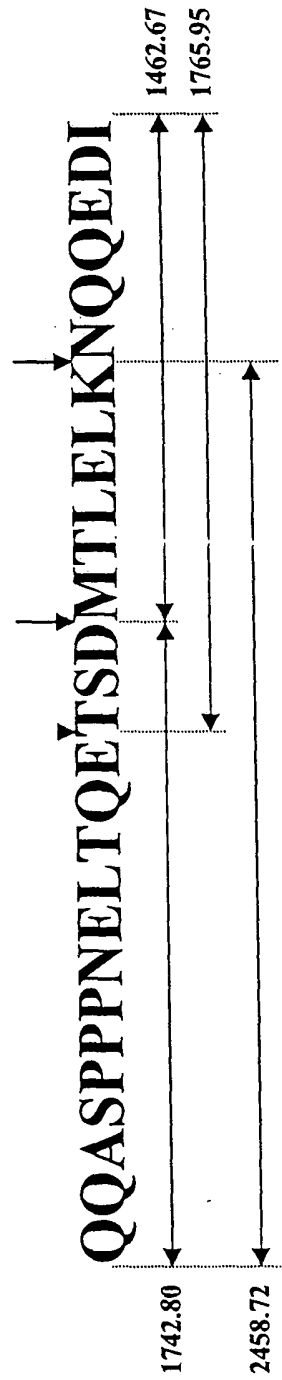


Figure 58

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

SCP-1 (545-578)

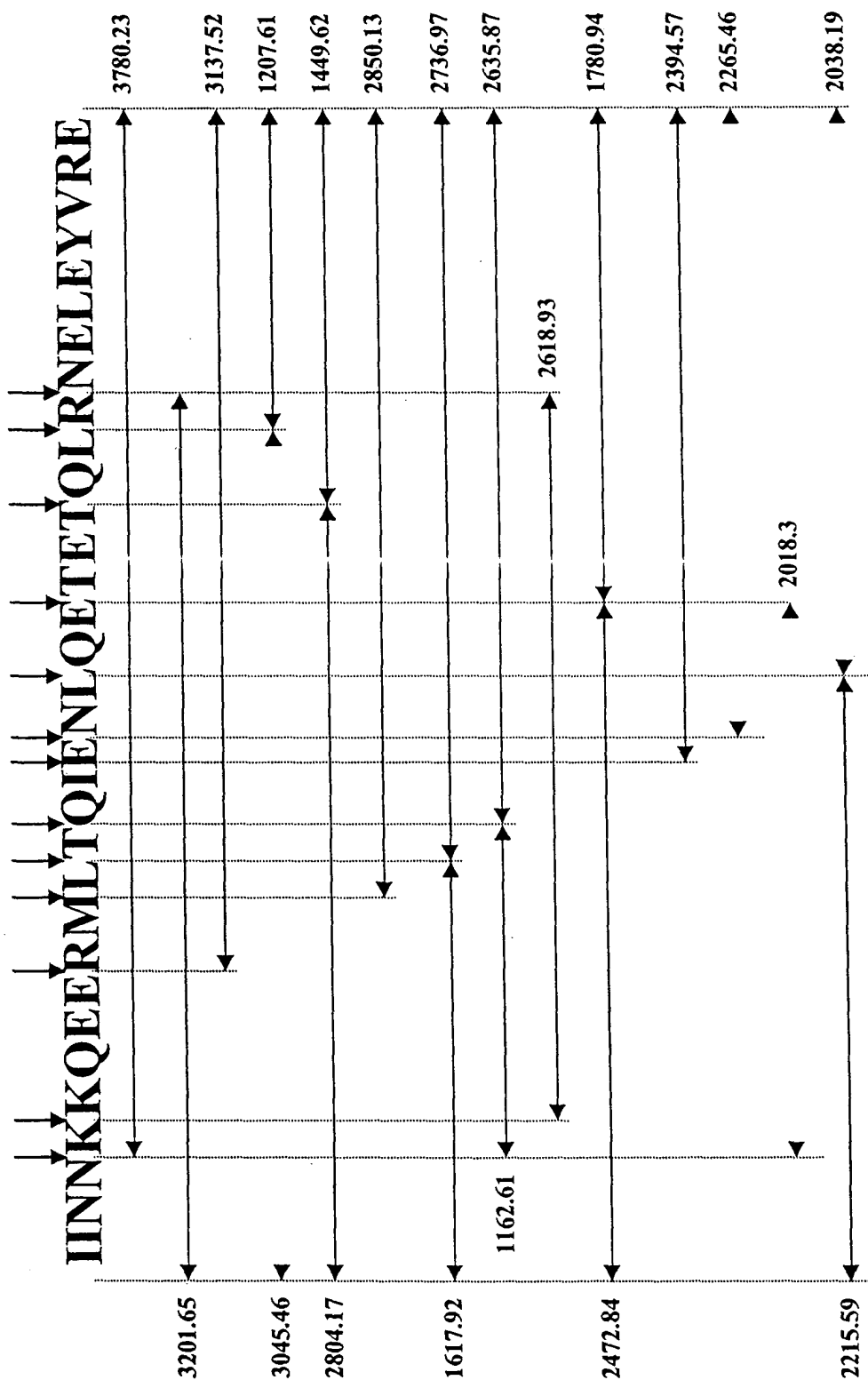


Figure 59

SCP-1 (559-585)

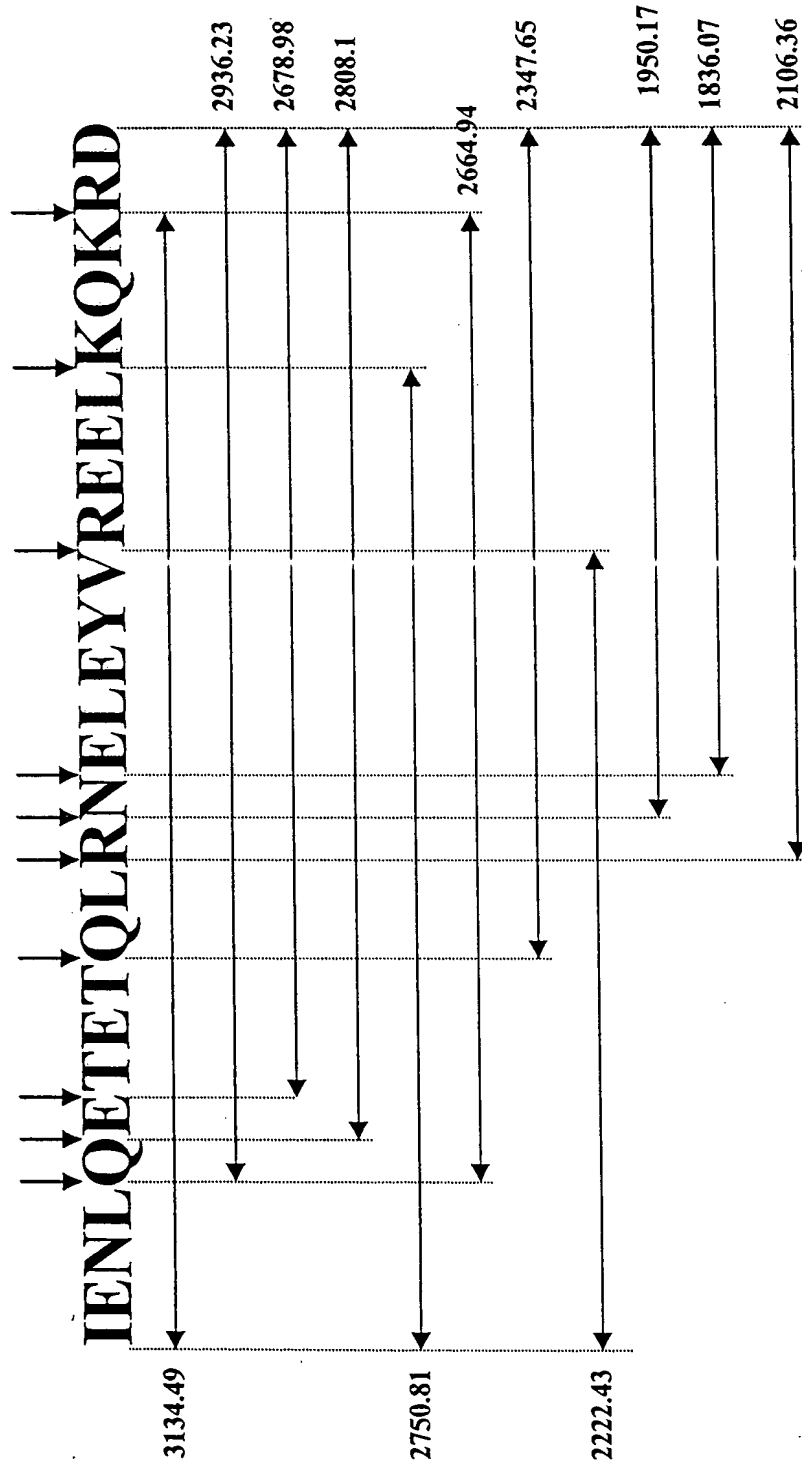


Figure 60

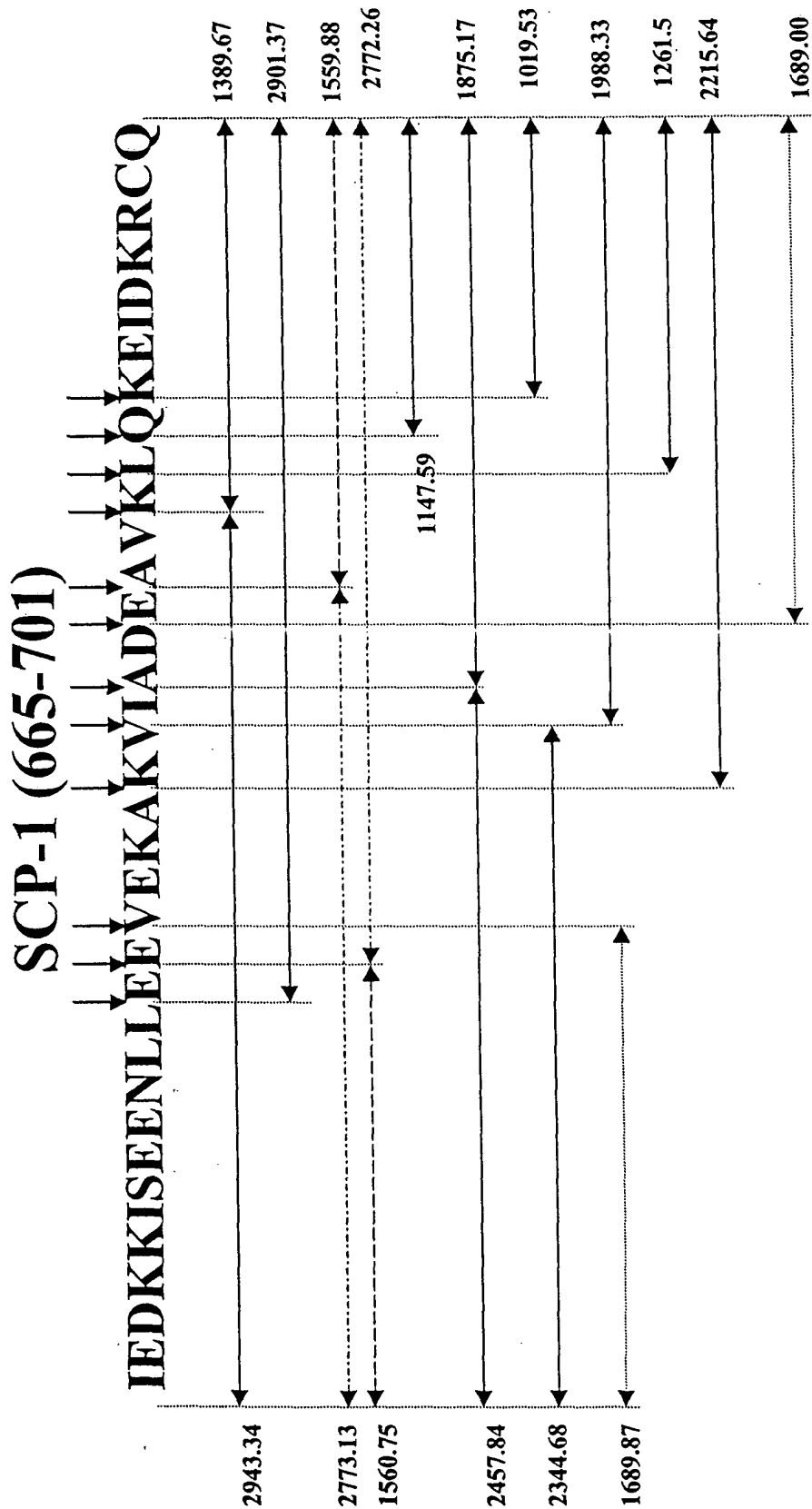


Figure 61

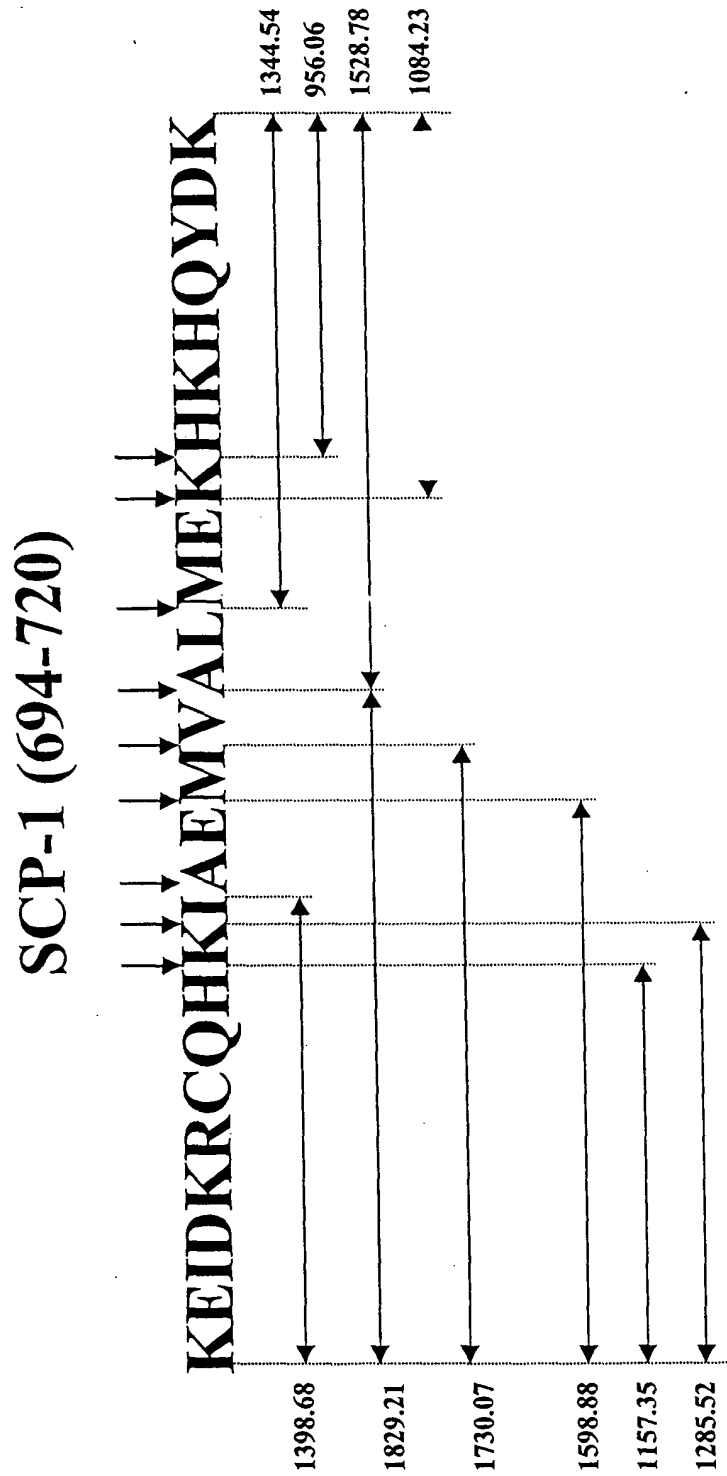


Figure 62

SCP-1 735-769

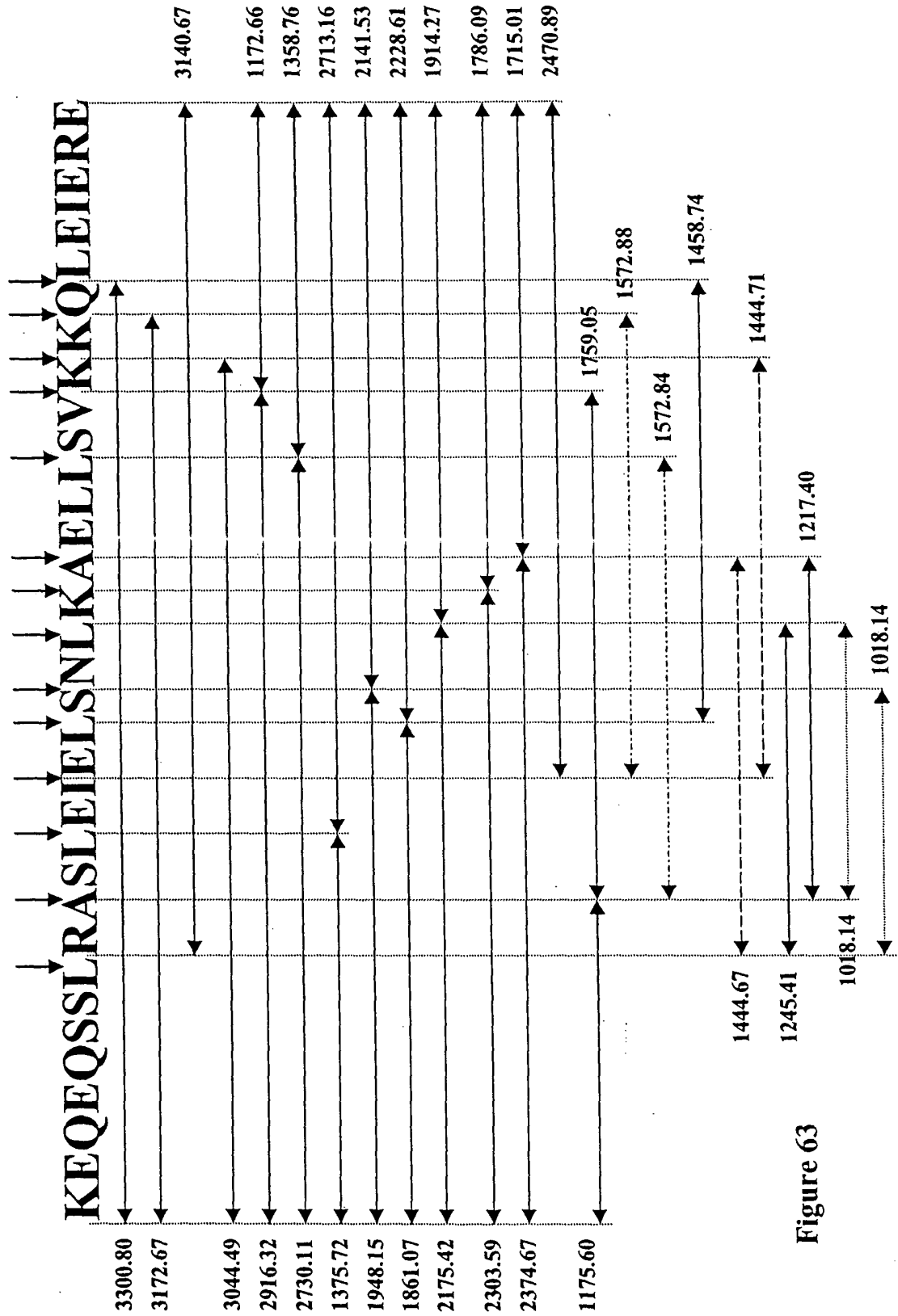


Figure 63

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

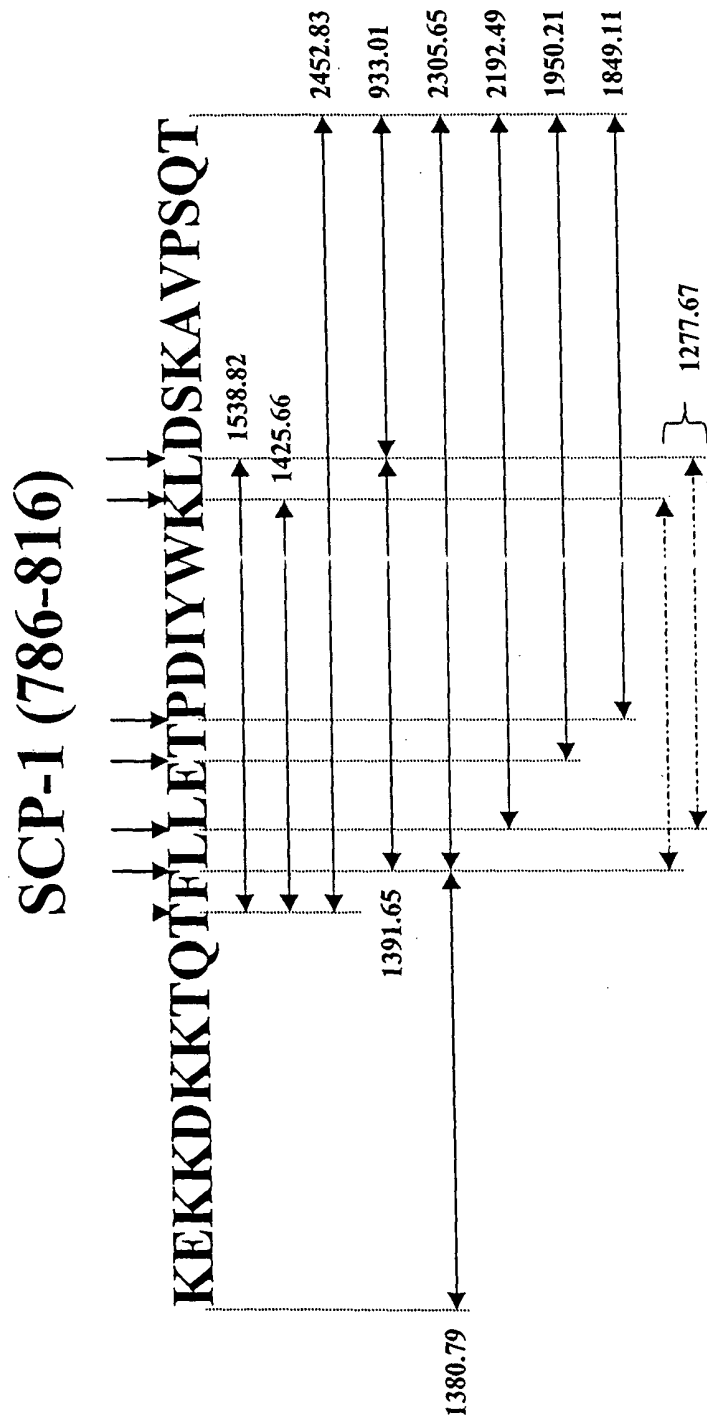


Figure 64

SCP-1 (806-833)

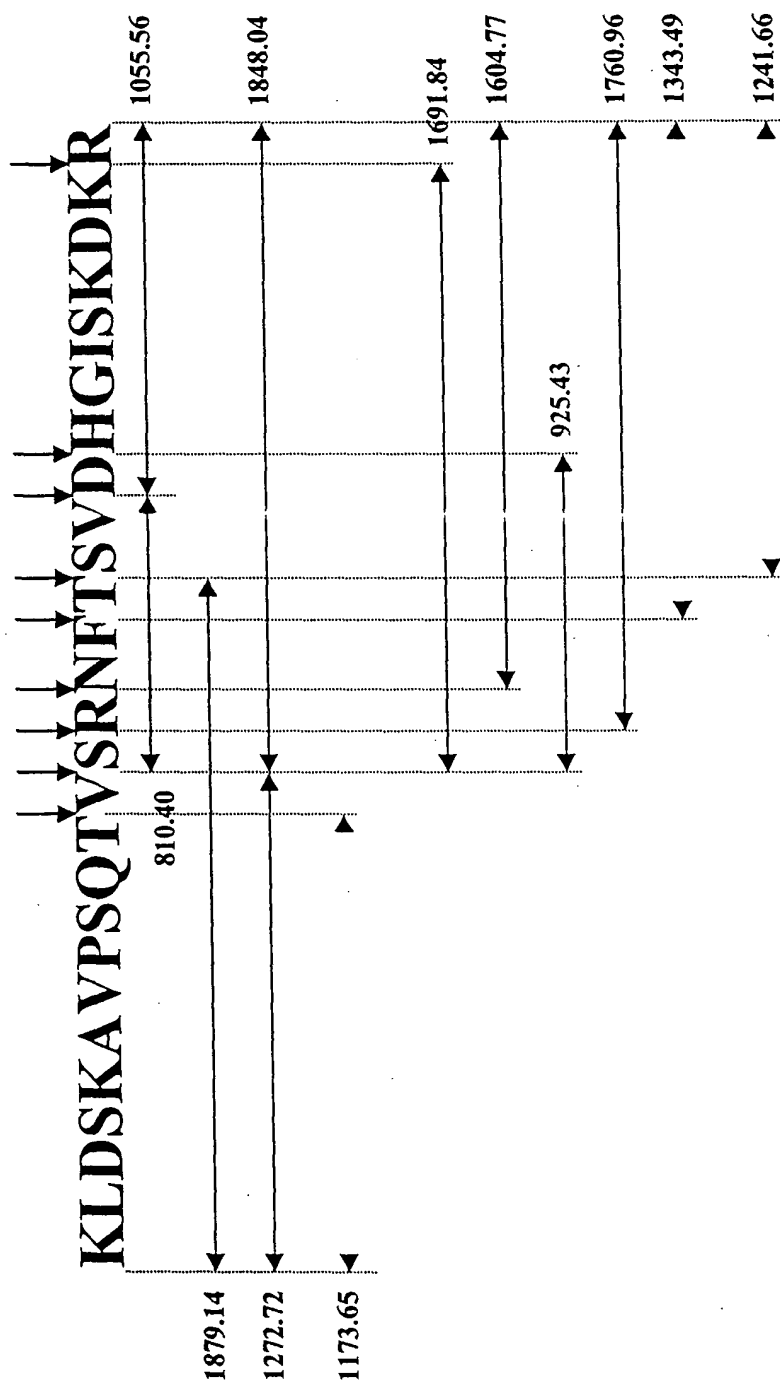


Figure 65



EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

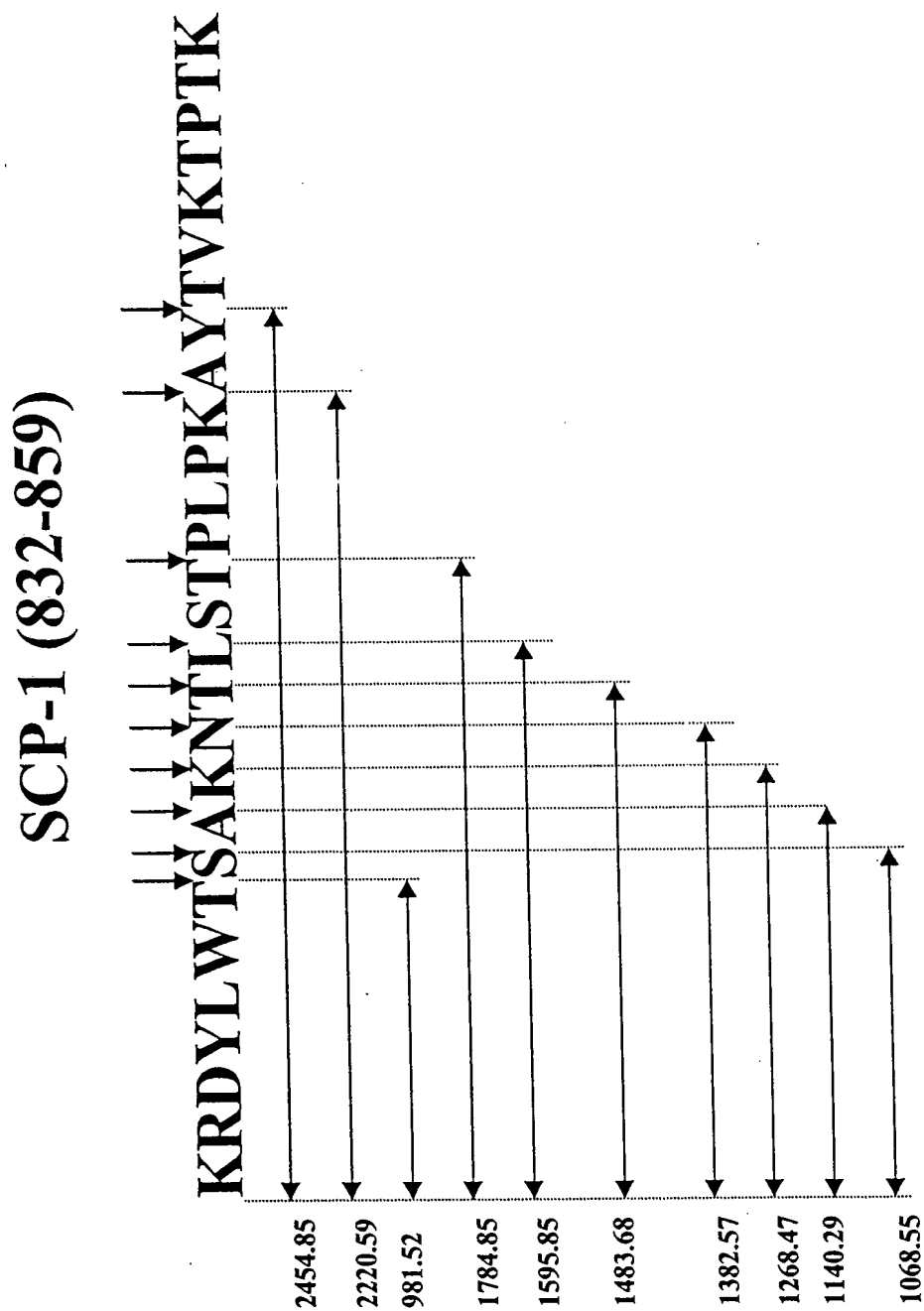


Figure 67

EPITOPE SEQUENCES

Simard et al.

Appl. No.: Unknown

Atty Docket: MANNK.032A

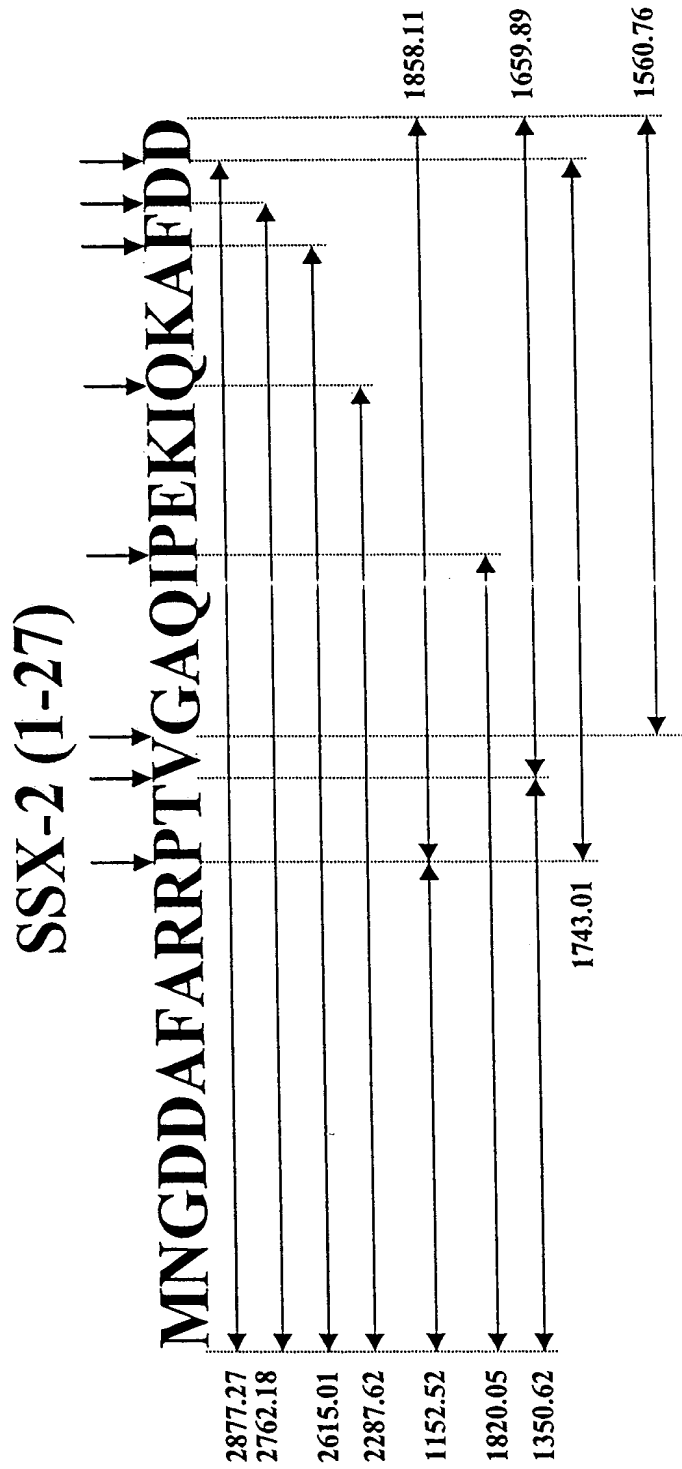


Figure 68

Survivin (116-142)

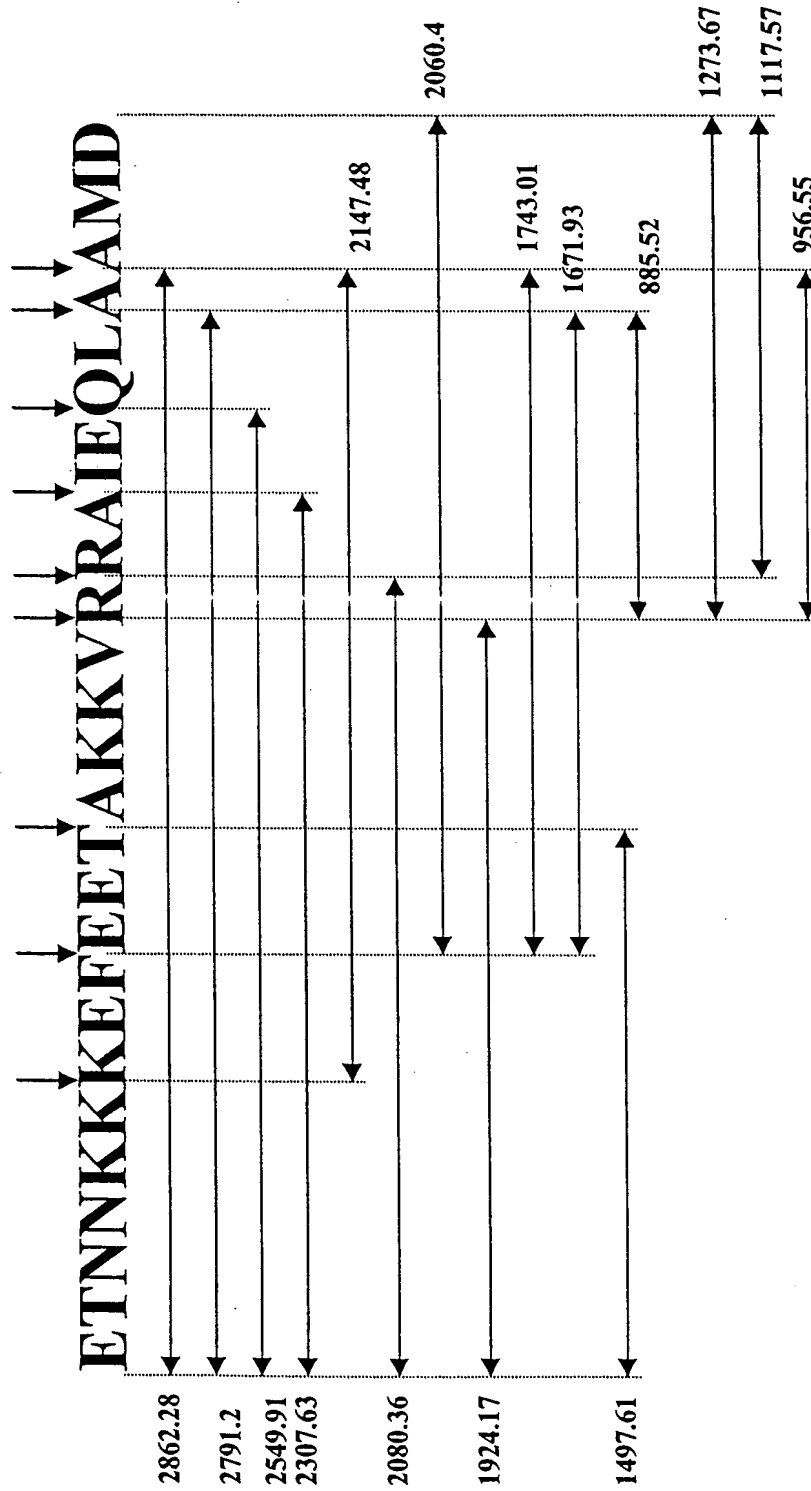


Figure 69

BAGE (1-35)

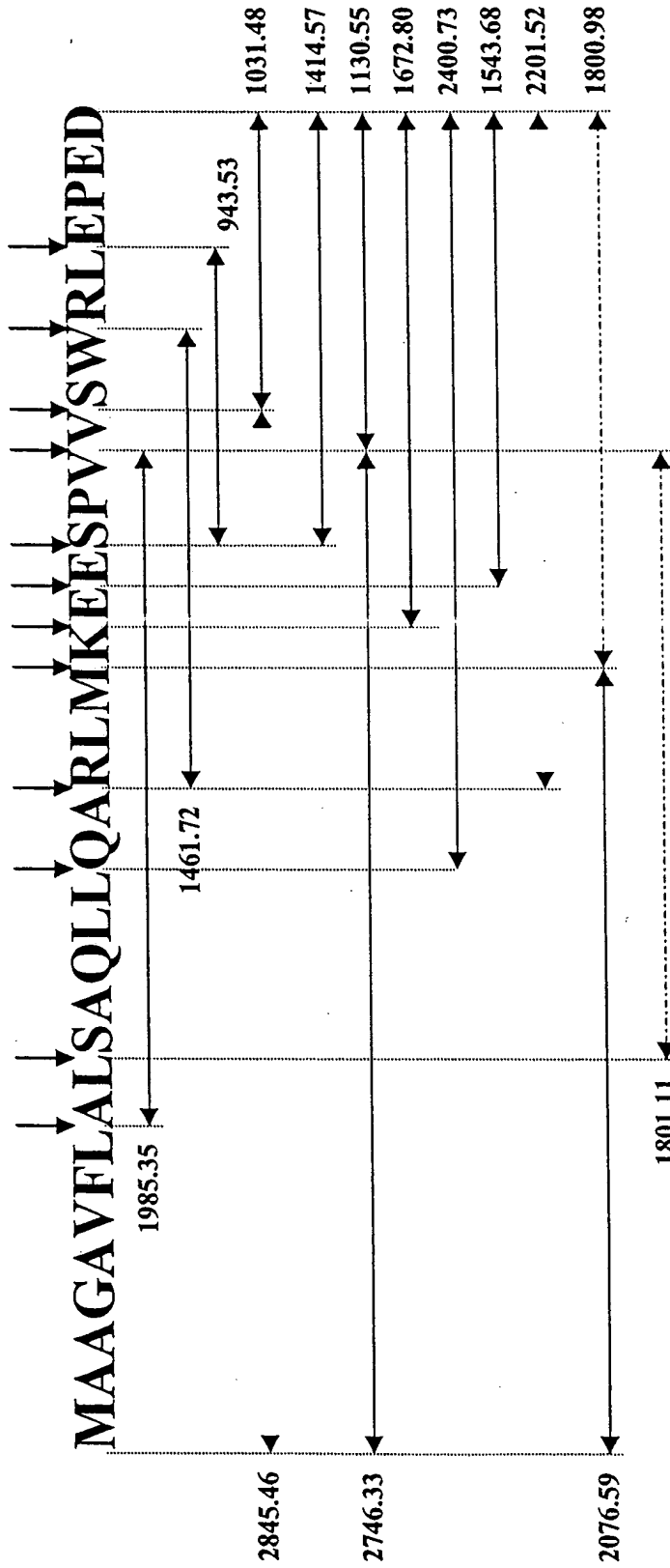


Figure 70